

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, July 7, 1855.

American & Foreign Securities Contrasted.

What more than anything else distinguishes the United States is the almost entire exemption from the controversies and contests which disturb and distract the nations of the old world. On this continent we have no rival or enemy whose designs can give a moment's apprehension or alarm. We are invulnerable to all attack from abroad, and do not presume, by any physical demonstration, to extend our power or influence beyond the unoccupied portions of the territory by which we are partly surrounded; and as our domestic institutions reflect the opinions and wants of the people of the several States, and are constantly modified to meet any change in the popular sentiment, and as implicit obedience is rendered to our laws from a conviction that they promote the general good, better than any other that could be devised, we are saved the maintenance of those vast military establishments which are both the leading characteristic of, and the most oppressive burden upon the nations of the old world. The cost of the maintenance of this burden often exceeds the

largest sum that can be drawn by the most ingenious modes of taxation, and has to be met, by constant resort to loans which nearly, if not quite, equal the entire productive capacity of a people from whom they are drawn. In this country, fortunately, the policy of the Government is not guided and controlled by that of a neighbor, in whose ambitious designs or bad faith we are directly involved by the necessity of adequate means to circumvent them.

We do not intend to pursue this comparison, though it might be most interesting to inquire to what extent a nation may go in exceeding, in their expenditures, their yearly revenues. As the principle is fundamentally wrong in nations, as well as individuals, the end must be disastrous, however remote. It is undoubtedly postponed in any given case by the inventive genius of the times, which has so vastly increased the productive capacity of industry. Great Britain owes her achievements much more to her artisans, than her soldiers. Her national debt far exceeds in amount, the whole value of property in the United Kingdom one hundred years ago.

But the expenditures of European nations bear no relation to their wealth or progress in arts or commerce. Austria, one of the least commercial nations of the old world, and with comparatively little accumulated wealth, is forced, from the relations she sustains toward other nations, and her own people, to support a vast army, at a cost far exceeding all her public revenues. She thinks herself compelled to regulate her policy more by what her neighbors are thinking or doing, than by considerations drawn from the wants or necessities of her own people. So long as diversities of nationalities, or of opinions, or objects prevail, so long must vast establishments be kept up to maintain in each country the existing status. Every year adds to the cost of its maintenance, and for aught we can see, will add to it, till, as in the case of Spain, practical repudiation is the result, or the nation falls from pure exhaustion.

From the fortunate position of this country we are saved the necessity of becoming a party to European politics and the necessities and burdens they impose. Because Great Britain may from some unexplainable design or caprice, add 50,000 additional troops to her forces, we do not feel

called upon to make this caprice the law of our conduct and raise an equal force to check-mate her. The scope of action of our Government, therefore, is limited to such measures as promote the good of the people, and in any given emergency its acts are such as would characterize a man or body of men in the prudent management of their affairs. Thus, the ordinary sources of revenue of the General government, and of all the State governments exceed the ordinary expenditures. When an extraordinary expenditure is required for unusual objects, the necessary means are raised upon a contract which has all the characteristics of a commercial transaction, and which provides for the payment of the loan, with a stipulated rate of interest, on a day certain. The first step of the borrowing party after receiving the money is to adopt such means as will pay the debt at maturity by the operations of an established law. The greater part of the public debt of this country is owed by the States. The functions of the governments of these are purely *pacific*. Their debts have, almost without exception, been contracted for works of public improvement, from the influence of which the people have been benefitted to a much greater extent than their cost. Our public debts, unlike those of any other country, are strictly commercial transactions, for which a full equivalent has been received. They possess, therefore, a guaranty for their safety which none other can show, in addition to the agreement for their specific payment, for which means are certain to be provided, as before stated, by the operations of law. There is, therefore, no danger of their excessive increase, or that they will exceed the safe limits of commercial enterprise. The creation of State, or national debts, payable "at the pleasure of government" is too odious an idea to be tolerated. The legislation of this country has in fact the exactly opposite tendency, of restraining the legislatures of the several States from the creation of any debt. Such clauses are now usually inserted in the constitutions of the several States as fast as they are amended, and a few years only will elapse before such restrictions will become the organic law of nearly every State.

We make these remarks for the purpose of giving a distinct idea of the nature of what may be

termed the *public indebtedness* of this country. It differs intrinsically from that of any other country. The particulars in which it does differ, constitute its superior value. It rests equally upon national faith, while for every dollar borrowed for public improvements, and for which nineteen-twentieths of it have been contracted, our people have two dollars to show. The disposition to pay is generally in proportion to the extent of means possessed, and the consideration rendered subjected to this test, the value of the securities of foreign governments can give no ratio to those of our own.

Railroads in Connecticut.

REPORT OF THE GENERAL RAILROAD COMMISSIONERS TO THE LEGISLATURE OF 1854-5.

New York, Providence and Boston.

This road was chartered in 1832, and began operations in 1839. It is what is usually called the Stonington road, and was the first one chartered and operated in Connecticut.

It forms connections at Providence with Boston and Worcester trains, and connects at Stonington with boats for New York and New London. By means of water conveyance it accommodates the New London and New Haven, and the New London, Willimantic and Palmer Railroads.

The Commissioners have inspected this road at different times during the past year. The road has always been found in excellent condition, excepting that some of the rails are considerably worn. The engines used on the way-trains are not of the most modern style, nor of large capacity, but appear to be in good working condition. A portion of the rolling stock has evidently been in use for a considerable length of time and is somewhat worn, but in a safe condition.

The station house at Stonington is convenient for the exchange of freight, but the accommodations for passengers are not of an extravagant character. No accident on this road has come to our knowledge the past year.

Norwich and Worcester.

This road was chartered in 1832. Commenced running trains in 1840. Its trains connect as far as practicable with Nashua, Western, and Worcester and Boston, in Mass., and to some extent accommodates the Boston and New York Central, Providence, Hartford and Fishkill, and connects at Norwich with New London, Willimantic and Palmer road, morning and afternoon. Two express trains pass over this road daily, connecting with steamboats at Allyn's Point, seven miles below Norwich, forming a convenient and expeditious route between the cities of Boston and New York.

The company have fifteen engines and the same number of passenger cars. The engines now in use on the road are not all of the first class. In fact, some of them can hardly be deemed sufficient for the purposes to which they are appropriated. The buildings, station-houses and fixtures, together with the repair shops, do not compare favorably with many others in the State.

Although many of the rails are badly worn, the road is not neglected. At our last examination we found the track most of the way, well adjusted.

The passenger cars are good and of easy carriage. The persons employed in its operation are generally judicious and experienced men. A considerable amount has been expended on the road in placing new ties, and making general repairs.

It crosses the Hartford, Providence and Fishkill road at an even grade in the town of Plainfield. Permission has been given to the express passenger trains to pass this crossing between the hour of seven o'clock in the evening, and the same hour in the morning, without coming to a full stop as required by law.

It also has a draw-bridge, (seldom used,) upon its extension to Allyn's Point.

At an examination in August, we found the

Allyn's Point extension in an unsafe condition, and recommended immediate repairs. We also recommended that a flag-man be stationed at the Danielsonville road crossing, on the approach of trains from the north which do not stop at this station.

These recommendations were immediately carried into effect.

Hartford, New Haven and Springfield.

Was chartered in 1833, from Hartford to New Haven; from Hartford to Springfield in 1835. It went into operation in 1838.

This road is supplied with a double track nearly its entire length.

Connects with the Western, and Connecticut River Valley Railroads at Springfield, Mass.; Hartford, Providence and Fishkill, at Hartford; New York and New Haven, at New Haven, and by its connections forms a through land route between Boston and New York.

It crosses the Hartford, Providence and Fishkill Railroad, at Hartford, and the New London and New Haven road, at New Haven, on an even grade.

It has one branch connecting at Berlin and extending to Middletown, a distance of ten miles.

This road has been visited at different times during the past year, and invariably found in excellent working order, and possessing capacity for a large business. Its affairs appear to be conducted with safety and convenience, and all its departments receive every needed attention. Most of the engines and cars are in good condition. The workshops connected with the road are furnished with skillful mechanics and good machinery.

Housatonic.

Road was chartered in 1836; commenced its operations in 1842. The Commissioners gave this road a careful examination in September last. It was then with few exceptions, in fair order. The notice of the company was called to such places as in our opinion needed attention.

On an examination in April of this year, we found the repairs had been made, the bridges and masonry put in good condition, and the road generally improved, with the exception of a few places which had suffered from the action of frost.

The damages caused by the remarkable freshets of last year have been fully and faithfully repaired. The company have eleven engines, seven of which are in perfect order. The passenger cars are provided with doubled action breaks and safety beams, and those in use in good condition. A considerable amount has been expended upon the equipments of this road during the past winter.

Connections are made with the Western Railroad, by means of the Pittsfield and Berkshire roads in Massachusetts; with the New York and New Haven, and Naugatuck, at Bridgeport.

The amount of passenger business, although smaller than some other roads in the State, has been of late increasing. The station houses and buildings on the line, are of cheap construction and limited dimensions.

New York and New Haven.

Chartered 1844. Commenced using the road for trains 1848. Twenty-three engines, many of which are first class and large capacity, and sixty-seven passenger cars, most of them in perfect repair, are in use, and every part of the machinery bears the impress of workmanship and skillful management. Four express, eight through way-trains, and six local trains, are run upon this road daily, besides freight. Passenger cars, on reaching the city of New York, are detached from the engine and drawn by horse power to Canal street.

Connections are made at New Haven, with New London and New Haven, Hartford and New Haven, and Canal roads. At the junction in Stratford with Naugatuck; at Bridgeport with Housatonic; and at Norwalk with the Danbury and Norwalk Railroads.

This road, on account of its location and the

great number of passengers which are daily travelling upon it, is one of the most important to the State. The returns to the company show that nearly double the passengers are conveyed over this road daily than any other.

The Commissioners made a careful examination of its bridges, engines, cars, workshops and everything connected with its operations, in September, and again in April of the present spring. On our first inspection, we found a culvert much damaged by the effect of water, which materially weakened the road. In our opinion, also, a high rate of speed over Coscob bridge was attended with risk. We therefore recommended that the culvert at Greenwich be rebuilt, and that a rate of speed be adopted in crossing Coscob bridge not exceeding six miles per hour. These recommendations were carried into immediate effect.

The trestle and pile bridge at Coscob is being rebuilt on solid masonry in a substantial manner, and it is the design of the company to forward this work to completion at the earliest possible period.

It crosses the Housatonic at Bridgeport on an even grade, and passes over six draw-bridges. Permission has been given, with suitable regulations, for all trains coming from the west which stop at Norwalk station, to pass the draw at that place without bringing the trains to a full stop.

With the exception of six miles, where it connects with the Harlem road, it is provided with a double track its entire length.

The Commissioners were favorably impressed with the perfect order and regulations which the Superintendent has carried into every department of the business transactions of this road. Every precaution to prevent accidents has been adopted, and the best provisions are made for the comfort and convenience of passengers.

Among the recent improvements, none are more deserving, than that of Mansfield's patent Switch and Switch-house, which have been substituted throughout the entire length of this road, in place of those in ordinary use. This Switch is so contrived that the operator is obliged to step inside of a white house by means of a revolving door covering the place of operation: This door upon one side is white, corresponding with the entire building; the other side is of a bright red color, and when exposed can be seen at a great distance. When the Switch is changed to the turn-out track, the red side of this door by day, and a red light by night, is displayed, and signals the engineer of an approaching train that it must stop. The operator himself can not open the door until the Switch is placed upon the main track.

Its adoption in our opinion supersedes the necessity of flag-men.

Naugatuck.

Was chartered in 1845. Trains put upon the road in 1849. This road on our examination in September last, had not recovered from the effects of the uncommon freshets of last year. Its affairs, however, were at that time conducted with watchful care and prudence. A low rate of speed was recommended by us while the repairs were progressing.

We visited this road again in April last and found the necessary repairs nearly completed, and a marked improvement in many respects, from its condition before the injuries. Such is the condition of the country through which it passes, that the location necessarily brings it near the Naugatuck river, and subjects it to the course and action of that stream; which during some portions of the season is one of the most violent in New England. In the recent repairs, the spans of bridges and water courses have been very much widened, and the road-bed raised, which will, to a great extent, prevent the recurrence of serious damage by freshets.

The company have eight engines in perfect repair, eleven passenger cars, eight of which are in good condition. Four passenger and two freight trains are run daily.

It accommodates the Hartford, Providence and Fishkill Railroad at Waterbury; where suitable

connections will doubtless soon be made; also connects with New York and New Haven, at Bridgeport, and at the junction in Stratford; passing over two draw-bridges on New York and New Haven road.

Waterbury's car ventilator is used, which adds much to the comfort of passengers during the hot and dusty season, and is considered among the valuable improvements connected with railroads.

New Haven and Northampton.

Was chartered in 1846. Commenced running trains in 1848. Was thoroughly inspected in all its departments in August, and again in April last. The New York and New Haven Railroad Company have a lease of this road for a term of years, and are operating the same. It is now open from New Haven to Westfield, Mass., touching the Western Railroad at that place.

The road on our examination was in fair working order, excepting a few places thrown out of shape by the action of frost.

Its cars, engines, and other equipments, are suitably adapted to the business of the road.

It crosses the Hartford, Providence and Fishkill road at Plainville on its own grade, and connects at New Haven with New York and New Haven road.

Danbury and Norwalk.

Road chartered in 1849. Trains put upon it in 1852. We gave the road a thorough inspection in September, and found there had been serious injuries caused by the freshets of the past season. The rolling stock, however, was in good condition.

At our subsequent spring examination we found the damages all repaired, and a marked improvement in the span of its bridges, and the solidity and permanence of the mason work. The engines and cars are mostly new and in excellent order.

The regulations of this road are well adapted to give safety to the travelling public, and proper facilities for business transactions.

This like many other roads has suffered from the effect of frost. It intersects at Norwalk with the New York and New Haven road.

New London, Willimantic, and Palmer.

Chartered in 1847, and commenced operating upon a portion of the road in 1849.

That part of the road between N. London and Norwich like many others located near the water, possesses a large amount of curvature, and many of the curves are of small radius, but is nevertheless an important part of the road, as with suitable connections with the Norwich and Worcester, at Norwich, and New London and New Haven roads, at New London, it helps form the eastern land route between the cities of Boston and New York.

Its equipments are limited, but sufficient for its present business. Engines and cars at our last examination were found in fair working order.—The commissioners have passed over the entire length of the road twice during the year, and found it each time in a safe condition. The material that composes the road-bed is such that it can be kept in repair at much less expense than many others in the State.

Complaint has been made of the manner in which the affairs of this road have been conducted the past year, both on the account of connections and the transportation and exchange of freight. Some changes have, however, been made of late, which appear to give general satisfaction.

The station house at Norwich is not adapted to the wants either of the company or the public, and is in many respects dangerous. The apology offered for neglecting to furnish better accommodations at this point is found in the Commissioners' report of last year, to which may be added the provision contained in the nineteenth section of the Act of their incorporation, which requires the company to maintain a depot between the Wharf Bridge and Waterman's Point, where it is claimed to be next to impossible to erect such a building as the business of the road requires. A new sta-

tion house has been commenced above the bridge, and will, when finished, better meet the wants of the public. The Commissioners believing that a building in the latter place will accommodate the public quite as well as at any other locality, recommend that the clause referred to in the charter of this company, be repealed.

The depot at Willimantic, next in importance to the one in Norwich, is inconvenient and difficult of access.

This road has three unimportant draw-bridges, and crosses the Hartford, Providence and Fishkill road at Willimantic on its graded surface.

Permission has been given the company with suitable regulations, to pass the draw at New London without first coming to a full stop.

Hartford, Providence, and Fishkill.

Chartered 1847. Commenced operating with cars 1849. This road is now open for public travel, and in operation from Waterbury in this State, to Providence in Rhode Island, a distance of 123 miles.

It makes connections with the different roads leading into Providence;—accommodates the Norwich and Worcester railroad at Plainfield;—connects at Willimantic with New London, Willimantic and Palmer road;—at Hartford with Hartford, New Haven and Springfield;—at Plainville with New Haven and Northampton;—at Waterbury with Naugatuck railroad and is the longest road within the State.

Those portions of it between Bristol and Waterbury, and Willimantic and Providence, have been opened for public travel within the last year. At our examination in October we found that the bridges had not been fully repaired which were injured by former freshets, and that some other portions of the road needed attention. Since that time, however, the bridges have been put in good order with one exception. That section of the road between Bristol and Waterbury is in an unfinished state, and care will be necessary in its operations to prevent accident, until it is better fitted for travel. A rate of speed has been adopted which, if not increased, will be attended with but little risk. The other new portion of this road is in better condition, the most of it being well constructed and possessing every appearance of durability.

The eastern part of the road-bed is of a character which will suffer comparatively little from the action of frost. The station houses appear to be of a temporary character. The engines and cars now in use, are all in excellent condition and well adapted to passenger travel.

This road passes over four other railroads in this State, on an even grade, and one draw-bridge over the Connecticut river at Hartford. The depot at Willimantic, one of the most important east of Hartford, is poorly adapted to the wants of the public.

Middletown Branch.

Chartered in 1847. Commenced running trains in 1851.

This road is owned and operated by the Hartford and New Haven railroad company. It is ten miles in length, and connects with trains for Hartford and New Haven at Berlin, its terminus being at Middletown.

When we first visited it, we found it in a fair condition with the exception of some defective ties, which on subsequent examination were found replaced by new. The arrangements on this road seem adapted to public convenience. No separate account of its amount of business has been reported.

New Haven and New London.

Chartered in 1848. Began to run trains in 1852. The order and regulations with which the affairs of this road are conducted meet with very general approval. The station houses and buildings throughout its entire length, are remarkable for convenience, and their neat and orderly condition.

No part of its business has the appearance of neglect or want of attention. The Commissioners have visited and inspected this road twice during the past year, and as yet have seen but very lit-

tle which could be changed for the better, but much that is worthy of imitation. Six passenger trains run over the road daily, making connection at New Haven with New York trains—at New London with New London, Willimantic and Palmer road, and boats for Stonington; and it is a part of the Eastern, Boston and N. York land route.

Passengers and freight are transported across Connecticut river by means of a steam ferry boat, which makes but a few minutes' detention.

This road crosses four draw-bridges, also one railroad at even grade.

East Thompson.

As this road is only graded in part, and no important progress having been made the past year, there is nothing of interest to add to the former report of the Commissioners.

Boston and New York Central.

That part of this road leading from Mechanicsville in the town of Thompson, to Blackstone in Massachusetts, where it unites with what was formerly called the Norfolk County road, is of recent construction, and at our last examination, in an unfinished state.

Its junction with Norwich and Worcester Railroad, makes a quick and convenient route to Boston for persons on the line of the latter, south of Thompson.

The Commissioners visited this road last fall, and examined its condition. It was found to be in many respects unfit for service, and in our opinion, unsafe for the rate of speed then running.—We recommended the adoption of a rate of speed not exceeding fourteen miles per hour. This recommendation was totally disregarded. Owing to some financial difficulties the trains were discontinued. Since which time the road has been much improved, and one train of cars has recently commenced running. Eight miles only are located within this State.

The report of the State Commissioners of last year, as well as the Act requiring us to report any violation of law, has called our attention to the question whether any charter exists which authorizes the present location of this road. It will be seen by reference to an Act of Massachusetts, that in 1849, a charter was granted for a road which should run from "Southbridge through Dudley, Webster, and Uxbridge to Blackstone, with a right to pass through Connecticut, by leave of that State." It also appears that leave was granted by Connecticut the same year to pass from that point in the dividing line between this State and Massachusetts, thence through a portion of Thompson in Connecticut in the most convenient way toward said Blackstone, so as to form in the most convenient manner a continuous railroad from Southbridge to Blackstone.

In our opinion it requires a broad construction of this grant, to allow the building of a railroad from the north-east corner of the town of Thompson, in a direction toward toward the city of Norwich.

New York and Boston.

The grading of this road which is now in process of construction, has been continued during a greater portion of the year, between Middletown and New Haven. The Commissioners visited these works in the month of April last. We found the masonry of the most substantial character, and the grading well prepared for a double track.

By a late act of the Massachusetts Legislature the Charles River Railroad Company of that State has been authorized to unite with this road under the common name of the New York and Boston Company, so as to make one Corporation under one management, and thus secure an uninterrupted line from the city of New Haven to Boston.

Owing to the unusual financial troubles so universally felt the past year, but little progress has been made in its construction. It is understood that a change of contractors has recently taken place, and that arrangements are being made which will greatly facilitate the building of the road. Beyond this, there is nothing of interest to add to the report of last year.

Abstract from the Annual Returns showing the leading statistics of the railroads in Connecticut.

Name of Road.	Entire Length.	Double Track.	Capital paid in.	Cost of Road.	Gross Earnings.	Expense of Working Road.	Net Earnings.	Dividend.	Debit.	Surplus.	Number of Persons carried in Cars.	Fatal to Passengers.	Fatal to Persons not Passengers.
Norwich and Worcester.....	66	—	\$2,825,000	\$2,122,300	\$2,596,488	\$39,341	\$222,754	\$229,178	\$93,550	\$126,690	207,769	2	3
New York, Providence & Boston.....	60	—	1,508,000	1,508,000	43,160	273,848	162,668	111,179	446,700	...	104,041	..	..
N. London, Willimantic & Palmer.....	66	—	1,700,000	1,527,827	23,149	187,080	65,367	71,703	1,007,826	...	148,048	..	..
New Haven and New London.....	60	—	788,258	1,450,318	29,006	103,986	69,618	44,368	735,165	...	240,682	..	..
Hartford, Providence & Fishkill.....	72	—	4,500,000	1,899,115	8,780,651	30,296	166,212	72,019	1,719,561	157,659	599,487	..	..
N. Haven, Hartford & Springfield.....	72	—	2,350,000	2,350,000	45,662	757,651	369,422	388,229	948,000	...	1,111,031	..	..
New Haven and Northampton.....	55	—	922,500	1,400,000	25,454	139,622	79,967	69,655	600,000	13,466	1,111,031	..	..
New York and New Haven.....	62	—	3,000,000	2,992,450	4,980,407	80,329	906,018	670,407	2,252,647	...	1,111,031	..	..
Naugatuck.....	67	—	1,031,800	1,031,800	27,669	238,266	269,748	40,004	573,995	16,124	1,111,031	..	..
Housatonic.....	74	—	2,000,000	2,000,000	2,429,066	32,825	380,792	312,961	474,177	81,801	1,111,031	..	..
Danbury and New York Central.....	60	—	400,000	278,560	371,504	16,000	48,654	12,991	88,200	19,247	1,111,031	..	..
Totals.....	749	111	\$23,675,558	18,589,173	28,884,483	...	3,527,225	2,286,315	1,190,692	499,713	2,936,706	2	19

* Includes repairs of damages caused by freshets, amounting to over \$100,000.

Nashua and Lowell Railroad.

This was the first railroad chartered in New Hampshire, having been incorporated in that State on the 26th day of June, 1835. The act of incorporation provided that no other railroad should be granted within thirty years, running parallel to, or within five miles of the former. On the 16th of April, 1836, the Legislature of Massachusetts granted an act for the incorporation for the part of the road lying within that State. The two companies voted to consolidate their interests in 1836, but as there appeared to be no authority in the original charter for such a step, special authority was obtained from the Legislatures of both States early in 1838, and the consolidation immediately perfected under the same.

The construction of the road was commenced in 1837, and a passenger train commenced running on the 8th day of December, 1838, to a temporary depot three-fourths of a mile below Nashua. On the 23rd of December of the same year, the road was completed for its whole length.

The route of the road lies upon the immediate bank of the Merrimack River, is nearly level, and involves no expensive structures, and no difficulties in the way of construction. The increased cost in 1845 and 1849 were for double track and other outlays necessary to the wants of an increasing traffic. The double track was commenced in 1845, and completed in 1846. The road is well constructed in every particular and amply furnished with equipment, and every accommodation for a large traffic.

With the exception of a small floating debt incurred for the purchase of lands at Lowell, the company had for several years no indebtedness of any kind. To assist in the construction of the road, the State of Massachusetts loaned the company \$50,000. This loan was, however, soon returned by the company, since which they have had no debt, with the exception of one incurred, as above stated, for the purchase of land in 1853, of \$24,000, but which at the date of the last report had been reduced to \$16,000.

The road forms a part of the great line extending from Boston to Concord, New Hampshire, occupying one of the best routes of commerce and travel in the United States. Over it passes a large part of the traffic of New Hampshire and Eastern Vermont. At Lowell it is connected with the Boston and Maine road by means of the Lowell and Lawrence; and at Nashua, in addition to the Concord, with a number of less important roads radiating from that place. The road has been uniformly profitable, having paid dividends at the rate of nearly 9 per cent. since the date of its opening.

The cost of the road slightly exceeds its capital stock and indebtedness, the excess being provided for out of the earnings.

Copy of Balance Sheet.—COST OF ROAD.

Graduation and Masonry.....	\$116,827 63
Bridging.....	4,405 85
Superstructure.....	238,998 85
Stations, &c.....	98,198 95
Land and Land Damages.....	88,980 06
Locomotives.....	46,240 48
Passenger Cars.....	13,792 71
Merchandise do.....	35,651 09
Engineering and Agencies.....	21,510 61
	\$654,003 23

RECEIPTS.

Capital Stock.....	\$600,000 00
Floating debt.....	16,000 00
Balance supplied from.....	...
Earnings.....	38,603 23
	654,003 23

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; Rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; Per centage of gross Earnings; Div. of net Earnings, of the Nashua and Lowell Railroad since the opening of the first division to the present time.

Year.	Cost.	L. gth.	Cost per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per mile.	Percentage of Gross Earnings.	Percentage of Net Earnings.
1839*.....	\$353,662	14 1/4	\$24,818	\$56,068	\$28,658	\$26,396	7 1/2	\$36,647	\$18,199	\$207	\$3,021	16 1/2	7 1/4
1840.....	368,704	14 1/4	25,873	82,639	62,533	30,106	7 1/2	36,794	46,549	295	5,799	21 1/2	8
1841.....	380,000	14 1/4	26,666	132,497	96,967	35,530	8	75,733	55,700	1,063	9,280	31 1/2	9 1/4
1842.....	380,000	14 1/4	26,666	181,169	91,577	89,592	8	66,305	67,126	1,759	9,284	31 1/2	9 1/4
1843.....	380,000	14 1/4	26,666	84,079	39,902	44,087	12	43,755	37,195	3,028	6,900	22 1/2	10 1/4
1844.....	380,000	14 1/4	26,666	68,668	34,944	33,724	10	47,166	44,754	2,668	6,637	25	10 1/4
1845.....	500,000	14 1/2	35,087	112,681	68,010	44,671	15	53,007	54,682	5,041	7,907	22 1/2	11 1/4
1846.....	500,000	14 1/2	35,087	127,487	70,280	57,207	10	64,992	63,616	4,790	8,947	25 1/2	11 1/4
1847.....	500,000	14 1/2	35,087	169,187	96,937	72,250	10	68,142	82,621	6,572	10,970	31	12
1848.....	500,000	14 1/2	35,087	167,835	108,699	59,136	10	72,868	92,195	4,124	11,667	34	12
1849.....	600,000	14 1/2	41,386	156,435	98,456	57,978	10	67,097	79,757	9,705	10,788	26	11 1/4
1850.....	600,000	14 1/2	41,386	129,617	69,347	60,270	8	64,678	62,678	12,456	8,938	21 1/2	11 1/4
1851.....	600,000	14 1/2	41,386	117,017	55,445	61,572	9	47,833	60,568	9,100	8,070	19 1/2	12
1852.....	600,000	14 1/2	41,386	132,546	81,021	51,525	8	48,901	73,292	10,442	9,191	22	12
1853.....	624,000	14 1/2	43,034	162,945	101,792	61,153	8	63,155	89,521	10,269	11,286	26	13 1/4
1854.....	616,000	14 1/2	42,484	191,867	136,010	55,857	8	74,977	108,256	8,649	13,240	31	9 1/4

* The total earnings up to Jan'y 1st, 1859, were \$6,114; expenses of transportation \$4,185.

Providence and Worcester Railroad.

This company was chartered in 1844 by the Legislatures of Massachusetts and Rhode Island, with authority to construct a railroad between the above termini so as to meet at the State line. The capital stock of each was limited to \$1,000,000, in shares of \$100 each. Permission was granted the two companies to unite and form one corporation. The road was required to be commenced in one, and finished within three years from date of charter. This time was afterwards extended.

This road is 43 miles in length, occupying for the entire distance the valley of the Blackstone. The maximum grade per mile is 27 feet which occurs for about seven-eighths of a mile. The shortest radius of curvature is 716 feet for a short distance, two-thirds of the line being straight. The total degrees of curvature are 2,546½, or a little less than 60 to the mile. The entire ascent is 526 feet, and descent 56 feet. In its course it crosses the Blackstone at several points, requiring altogether 4,655 feet of bridging. The weight of rail used is 58 lbs. per yard. Its connections are numerous and important. At Providence it unites with the Stonington, and the Hartford, Providence, and Fishkill roads; and at Central Falls, through a branch line, with the Boston and Providence. At the town of Blackstone, it is intersected by the New York and Boston Central line; and at Worcester, it connects with the Boston and Worcester, the Western, and the Worcester and Nashua roads. The general course of the road is North-west and South-east.

The company organized in 1845, on a subscription of \$1,000,000 of which nearly the whole had been subscribed by inhabitants in Rhode Island. In November following the two companies united, choosing for their President Alexander Duncan, for Treasurer Isaac Brown, and for Secretary A. O. Peck. The work of survey and location had been previously begun. By the contract for construction, which was commenced early in 1846, the grading, masonry and bridging were to be executed by the 1st of April; and the superstructure laid by the first of August, 1847. The grading and masonry were to be for a double track between Providence and Valley Falls, and from that point to Worcester, for a single track. By authority of the Legislature, they purchased part of the line of the Blackstone Canal which they occupied for the road-bed, as far as possible. On the 27th of September, 1847, trains commenced running on the southern part of the road; and on the 20th of October following, the line was opened through its entire length. The branch to the Boston and Providence road was finished before the close of the year.

The company paid six per cent. interest on the stock paid in from its receipt till the date of opening the road.

The cost of the work at this time amounted to \$1,756,755, of which about \$220,000 had been expended for the benefit of the B. & P. road, for the construction of the branch, and subsequently refunded. The capital stock, which was all paid in, was \$1,100,000. To meet the remaining expenditure, an issue of six per cent. mortgagebonds was made this year. The above were to fall due in 1851, 1852, and 1860. The amount sold, at the end of the year, was \$392,000. At the close of

1849, it had increased to \$424,000. Since then it has been diminished by the payment of the bonds falling due in 1851 and 1852, and amounts at present to \$300,000 which will mature in 1860.

The earnings for 1847 (for an average of about three months) were—from passengers \$21,128 43, and from freight \$9,273 31, making a total of \$30,401 74. The net earnings were applied to the finishing of the road till the close of 1849, when a cash dividend of three per cent. was declared, in addition to one of 10 per cent. in stock paid in the previous May. Dividends have been regularly paid since that date, except for the last six months of 1851. In August, 1853, a serious collision occurred by which thirteen persons lost their lives, and others were dangerously wounded.

The capital stock has been increased at various dates since opening, for building the double track, and otherwise making improvements. Its present amount is \$1,550,000. The floating debt is \$51,500.

Statement, showing the Cost; etc., etc., of the Providence and Worcester Railroad, from the date of its opening to the present time.

Year.	Cost.	Mileage.	Cost per mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividends.	Receipts from Passengers.	Receipts from Freight.	Receipts from Mails, and Misc.	Earnings per mile.	Per centage of Gross Earnings.	Do. of Net Earnings.
1847.....	\$1,756,755	43	\$40,856	\$32,063	\$9,841	\$22,191	..	\$21,128	\$9,273	\$1,631	\$786	1.8	1.2
1848.....	1,873,865	43	43,078	193,844	83,890	109,954	..	117,386	78,917	2,541	4,456	10.9	6.9
1849.....	1,898,866	43	44,589	217,263	101,281	116,022	+13	118,219	98,921	5,112	4,994	11.2	6.9
1850.....	1,824,796	43	41,949	202,751	96,180	107,570	4	114,651	88,339	4,800	4,661	11.1	6.9
1851.....	1,820,064	43	41,840	*202,889	*96,968	*115,921	..	*117,043	*82,121	*3,722	*4,664	11.1	6.8
1852.....	1,731,498	43	39,904	253,690	114,175	139,514	6	129,043	118,665	6,081	5,882	14.6	8.8
1853.....	1,791,999	43	41,166	291,417	170,625	120,801	6	147,388	139,286	4,740	6,699	16.8	6.8
1854.....	1,843,832	43	42,875	316,616	122,773	86,843	7	155,775	155,103	5,737	7,278	17.2	4.7
* For eleven months.													
+ Ten per cent. of this was in stock.													
+ Including \$14,469 expenses of collision in August, 1853.													

The Schuyler Frauds.

Mr. Robert Schuyler offers the following explanation of the fraudulent practices charged upon him in the late report of the New York and New Haven Railroad Company. His explanation is addressed to the Tribune. It came in a late European steamer, but is without date, and contains no indication of the whereabouts of the writer. It is the first time Mr. Schuyler has been heard from since he absconded.

SIR.—In the last report of the New York and New Haven Railroad Company, it appears that the President stated that the Company had sustained a total cash loss of capital of \$137,527, by the various operations set forth in the Directors' report ascribed to me. If I had strength to do so, I should examine the details of these statements and show you, as I believe, that none of them are founded in facts, and that the conclusion is erroneous and untrue, and that no loss of cash capital has been the consequence of any act of mine. But I am only able at present to point out one single error, which, however, is of greater amount than the whole alleged loss, and which, on correction, at once places the balance on the other side. The account of R. & G. L. S. is charged by the Treasurer on 21st September, 1853, for 3,200 shares Harlem preferred stock \$169,200, for which sum that stock was sold to them; and for which they agreed to retire the bonds of the Company due 1st October, 1853, on which payment had been originally made for the stock. No other provision was made for these bonds, and on the 1st October and subsequently on presentation, all of them, amounting to \$160,000, were taken up by the firm, partly in cash (about \$110,000) and the remainder by exchanging with the holders, other bonds of the Company belonging to the firm. After the last bond was paid, I believe that the amount of the sale was adjusted and the balance due paid to the Company in cash or its equivalent. The Construction Books alone contained the amounts of the Stock and bonds, and should also show the particulars of the sale and settlements, and I have no doubt they do so; and if they do not, the facts are substantially as I state them. It follows then, either that the Treasurer's debit should not have been made, or that the President in combining the two books and making re-entries, for the purpose of correcting errors, should have credited the account of R. & G. L. S. with full payment for the Stock \$169,200, whereby the figures which he states to result in a balance against them of \$89,200, would show a balance of \$80,000 in their favor, even if the other items were correct, which is not admitted. I make no comment on these errors, but presume them to have been unintentional. Though I did not intend to trouble you as to the other charges, I beg to say, as to the allegation that \$10,156 were paid to me for specific purposes and not applied as intended, that if it is intended to assert that these sums were directly or indirectly applied to my own use, that after a most careful self-examination, I do not remember a single case of the kind, nor that any person ever applied to me or directly through any one else for the payment of any intended appropriation not paid over. If it is meant that there are no vouchers to show the payments, though the amounts strikes me as greater than I supposed, yet it is true that many payments in the nature of secret service, were made, to which no voucher could be required. I believe, however, that the Directors always had a general knowledge of these payments, and deemed them necessary. I am also charged with \$5,000 drawn from the earnings of the road for Norwalk damages. I am confident that I placed with the Treasurer, vouchers for every draft upon him, except for amounts paid with the knowledge and approval of the Directors, as counsel fees of a confidential character to gentlemen of standing and influence, which can be shown I believe, if necessary, by others than myself—and expect also the sum of \$500, drawn for lost baggage, expenses

and fees, waiting payment when I left my office, and I presume not paid over.

I hope you will publish this statement, which I have prepared under great difficulty—without documents and upon your report alone—in the greatest debility of body, and in a broken spirit, but with clear recollections.

ROBERT SCHUYLER.

This, it strikes us, is "straining at a gnat and swallowing a camel." If Mr. Schuyler wishes to vindicate his character, or make some reparation for the crimes he has committed; or even if he desires to excite anew the public interest, let him explain the uses to which he put the vast sums fraudulently taken by him, the amounts received on sales and on hypothecation of the New Haven stock; and such other matters as may assist to heal this mangled concern, with least injustice to all parties. As it is, he has hardly done well to break the silence of his obscurity.

Connecticut River Railroad.

This road was formerly owned by two different corporations, the Springfield and Northampton and the Greenfield and Northampton Railroad companies. The former was chartered in 1852, with an authorized capital of \$400,000, in fifty dollar shares, to construct a railroad from Northampton, through Hadley, and South Hadley, to Springfield, uniting at the last named place with the Hartford and Springfield or with the Western road. By the original act, the location was required to be completed in one year, and the construction in three years from date of charter. In 1844 these dates were extended to 1845 and 1847 respectively, and the capital increased to \$900,000. The right to unite with any other company was conferred, with the other usual privileges and restrictions.

The Greenfield and Northampton company was chartered in 1845, with a capital stock of \$500,000, in shares of one hundred dollars each, to construct and maintain a Railroad from Northampton through Hatfield, Whately, South Deerfield, and Deerfield, to Greenfield. By a vote of the stockholders in both corporations, the two interests agreed to consolidate, and were accordingly merged into one new company, bearing the name of the Connecticut River railroad, in 1845.

This road including a branch to South Vernon on the State line, is 50 miles in length, and occupies throughout the valley of the Connecticut river. From Springfield to Willimansett, a little over six miles, it proceeds along the east bank of the river. North of this village it crosses to the west margin by a substantial truss bridge. Thence it passes by easy grades along the base of Mount Tom, keeping close to the river and following its windings. To the north of this ridge it passes the river at two different points to avoid curvature.—From Northampton to Greenfield, 9 miles, its course is very direct, running due North and South. To the north of Deerfield, it crosses Deerfield river. The remainder of the distance to South Vernon has in general a North-east course. The road may be regarded as part of a great line, occupying the valley of the Connecticut throughout its whole length. At Springfield it is prolonged by the New Haven, Hartford, and Springfield. At its northern terminus, it connects with the Vermont Valley line. It is intersected by the two great East and West lines of Massachusetts, and

connects with the Cheshire by means of the Ashuelot road, 23 miles, which is now operated under lease by the Connecticut River company.

The following are among the characteristics of this road, as giving in their last annual report to the Legislature.

Length of single main track, 50 miles.
Do. of branches owned by the Co., $2\frac{1}{2}$ miles.
Do. of sidings, (about) $8\frac{1}{4}$ miles.
Weight of rail per yard, 56 lbs. for 36 miles, 61 lbs. for 14 miles.
Maximum grade, 32 feet for $6\frac{1}{2}$ miles.
Total rise and fall of main road, 680 feet.
Shortest radius of curvature, 822 feet for 889 feet.
Total curvature, 1,854 degrees.
Aggregate length of straight line, $35\frac{1}{2}$ miles.
Do. do. of truss bridging, 2674 feet.
Do. do. of all other bridging, (pile) 250 feet.

The first four miles of the road, between Springfield and Cabotville, were opened in February, 1845. In the following June, a consolidation of the two companies was arranged, the terms specifying that interest should be paid on the stock previous to the date of consolidation, and that the assessments should be equalized on the shares of each of the old companies. The new company organized in July, by the choice of Erastus Hopkins as President. On the 13th of December, thirteen miles additional were opened, completing the line to Northampton; and on the 17th of August, 1846, it was put in operation to South Deerfield, 11 miles further. The entire line to Greenfield was opened for use on the 23d of December in the same year. The extension to South Vernon was undertaken shortly afterwards, and completed in 1848.

In 1849, a contract was entered into with the Ashuelot Railroad Company by which the latter agreed to finish their road by the beginning of 1851, and the former to take and operate it, paying therefor for ten years from date of taking possession, seven per cent. per annum, with the privilege of renewing the contract for ten years longer, on condition of paying not over one per cent. per annum additional—the payments to be made semi-annually. The C. R. company engaged to keep in repair and deliver up the work in as good condition as when received. The other parties were to create no mortgage, but might issue notes or bonds to the amount of \$200,000.—The road was taken possession of in 1851.

To raise means for the completion of the work, the Board, in 1846, made an issue of six per cent. bonds payable at various dates. Of these \$167,000 were issued that year. The amount has since been increased at different times; and payments on them have also been made as they fell due.—They are not secured by mortgage. In 1850, an increase was also made to the capital, in order to clear off their floating debt, by an issue of preferred stock, bearing eight per cent. interest. The amount of this at present is \$307,500.

The financial condition of the company is thus shown from their last annual report to the Legislature.

Capital stock.....	\$1,750,000
Do. do paid in.....	1,591,110
Funded debt.....	245,000
Floating do.....	9,048
Total liabilities.....	\$1,845,153

COST OF THE ROAD.

For Graduation and masonry.....	\$513,242 93
Bridging.....	42,991 94
Superstructure, including iron.....	545,287 61
Stations, buildings, and fixtures.....	114,210 81
Land, land damages, and fencing.....	236,982 18
Locomotives and rolling stock.....	187,558 49
Engineering, agencies, and other expenses.....	161,970 80
Total.....	\$1,802,244 76

Which is equal to \$36,041 per mile.

Statement showing the cost, mileage, receipts, &c., &c., of the Connecticut River Railroad, from its Opening to the present time.

Year.	Cost.	Mileage.	Cost per mile.	Gross receipts.	Current expenses.	Net receipts.	Rate of Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per mile.	Per centage of gross earnings.	Do. of net earnings.
1845.....	\$511,472	36	\$14,207	\$13,521	\$5,519	\$8,001	..	\$10,101	\$3,419	\$2,392	\$375	2.6	1.5
1846.....	1,010,541	36	28,070	58,846	21,399	35,847	..	39,756	16,098	5,424	1,617	5.7	3.5
1847.....	1,167,156	36	32,421	123,561	30,774	93,177	..	70,207	48,819	6,424	3,443	10.6	8.5
1848.....	1,568,184	50	31,768	166,242	60,686	114,557	8	88,657	71,806	4,797	3,304	10	7.2
1849.....	1,766,678	50	35,333	192,072	95,090	96,982	8	106,261	79,818	5,992	3,841	11	5.5
1850.....	1,798,825	50	36,976	191,687	70,580	121,067	5	112,917	71,596	7,072	3,881	10.7	6.8
1851.....	1,801,592	50	36,031	199,894	102,185	97,709	5	111,850	76,579	11,454	3,999	11	6.4
1852.....	1,801,946	50	36,038	229,004	148,154	85,850	5	124,757	83,286	10,980	5,164	12.6	4.7
1853.....	1,802,244	50	36,044	255,230	156,122	102,098	4	135,655	118,794	10,771	5,164	14.3	5.8
1854.....	1,802,244	50	36,044	277,770	174,828	102,942	4	135,960	130,508	11,301	5,555	15.4	5.7

The dividends are on common stock only.

Creamer's Improved Method of Operating Car Brakes.

The principal features of this invention and its operation, are as follows:

To the ordinary hand wheel and brake-shaft, (for winding up the brakes) is attached a drum or loose pulley containing a strong spiral spring.—This spring is wound up by a reverse motion of the brake-shaft, to which is attached an arm and pawl taking into a circle of ratchet teeth on the top of the drum. When the spring is wound ready for use, it is held in check by a lever from the extremity of which passes a branch line to the top of the car, and connecting about six feet forward to the bell cord. The branch line is attached to

the lever by a ring in such a way that when the lever is drawn up vertically the ring disconnects. This is rendered necessary to insure the working of the brakes by the bell cord, whether the train is extended on an up grade, or contracted on a down grade. The attachment of the branch line of each car, some six feet forward, enables the engineer to apply the brakes of all the cars simultaneously, by pulling the bell cord as a means of the conductor to signalize the engineer. When the conductor pulls the bell cord it rings the bell, and simply makes slack on the several branch lines connected with the brake, but does not operate the brake. The conductor, however, can, if an emergency arises, instantly close all the brakes of the cars behind him.

This apparatus does not interfere in the least with the ordinary use of the brake by hand, even when set ready for use by the engineer.

It is of immense value to railroads as it not only increases the safety of the travelling community, but is a great benefit to the brakeman, as there is no occasion for compelling him to remain constantly on the platform in all seasons, and without regard to the weather, as is now the case. The brakeman can remain in the car if necessary, and when coming to a station step out and close his brake in the usual way, the spring remaining set, ready for use all the time. It will also greatly increase the confidence of the engineer, as he has the power of applying the whole brakes of the train instantly, without the aid of the brakeman, and with no more time or effort than giving the signals.

This system of enabling the engineer to close all the brakes at once is different from any device heretofore made, as the brakes of each car are entirely independent of each other. This is not a transmission of power from the engine, or a system of continuous brakes which we believe, even if ever so perfectly constructed, of but little practical value, for the reason that if the engine runs off the track, or becomes disconnected, the power is immediately lost, and nothing remains to check the momentum of the train. With this apparatus the locomotive running off would apply the brakes, and even if the engineer were thrown from his place the brakes would be applied with full force, and retained until released by the attendant. We ask all parties interested in railroads to examine this invention closely and thoroughly, as we are well convinced that the interests of railroads demand its immediate adoption.

Cheshire Railroad.

This road was originally owned by two companies, the *Cheshire*, chartered by the New Hampshire Legislature in 1845, and the *Winchendon* by the Massachusetts Legislature. The capital stock of the former was fixed at \$1,000,000; that of the latter at \$400,000, with the right to increase the same, in shares of one hundred dollars each. The road was to connect with the Vermont and Massachusetts line at Winchendon, Royalston, Templeton, or Gardiner; to cross the State line at Rindge or Fitzwilliam; and thence to proceed by the town of Keene, to some point on the Connecticut river. Permission was granted the two companies to consolidate and borrow money. The work of construction was required to be completed within five years from date of charter.

The length of this road is nearly 54 miles, of which about 11 are in Massachusetts. It connects at Ashburnham with the Fitchburg and Vermont and Massachusetts roads. At Keene, the county town of Cheshire, it is intersected by the Ashuelot road; and at Bellows Falls, its northern terminus, it unites with the Rutland and Burlington and the Sullivan roads, and through the latter with the Vermont Central and its connections. The road is a substantially executed work, laid

with a 60 lbs. rail to the yard through its entire length. The principal streams crossed are the Ashuelot to the north-west of Keene, and the Connecticut at Bellows Falls. The bridge over the latter is a handsome structure. In crossing the ridge dividing the tributaries of the Merrimac and the Connecticut, the road has a series of ascending and descending grades of sixty feet per mile for nearly 15 miles, besides heavy cuttings at various points. The total rise and fall amounts to 2,277 feet. The shortest radius of curvature is 955 feet, which occurs for 700 feet. About 31 miles consist of straight line, and the remainder of bridging is 933 feet. No part of the line is laid with double track.

The company was organized on a subscription of \$1,000,000, in 1845, by the choice of seven directors, of whom Thomas M. Edwards was elected President. Surveys for the final location of the road were shortly afterwards commenced under the charge of Messrs. Whitwell & Tilton. The first division was let in September, and the second in October following; and the work of grading, bridging, &c., was immediately begun. The terms of the contract required the whole line to be completed by April, 1848. The contractors, however, were not able to complete the work by the time specified. In May, it was opened as far as Keene, 32 miles, and the whole line early in Jan'y, 1849. The Connecticut bridge was completed in the following June.

The cost of the road having proved much greater than the original estimates, the Board in 1847, made an issue of six per cent. bonds, payable in 1852. Of these nearly \$400,000 were sold during that year. In January, 1848, a second issue of stock was brought out for sale at 75, of which over \$400,000 were shortly after disposed of. At the date of their fourth annual report (May, 1849) the payments on the original stock, including that taken by contractors, amounted to \$1,048,070; the bonds sold were \$454,650; the second issue of stock was \$405,309; and their floating debt was \$358,122—making a total cost of \$2,266,151. It should be stated that the stockholders were allowed interest on their cash payments before the road was put in operation. The amount of this last item, at the above date was \$183,788.

The earnings of the company for 1848 were—from passengers \$34,294, from freight \$43,387, and from mails \$2,352, making a total of \$80,033.—The running expenses for the same period were \$37,064, leaving \$42,979 as net gains.

By the last report, 31 Dec. 1854, the entire capital stock paid in amounted to \$2,083,825; the funded debt to \$731,200; and the floating debt to \$215,719—making their total liabilities \$3,030,744. Of the bonds \$550,000 mature in 1860, and the remainder in 1863. The cost of the road and equipment was as follows:

For Graduation and masonry	\$1,489,643 16
Bridging	41,490 38
Superstructure	479,821 59
Stations, buildings and fixtures	99,303 17
Land, land damages, and fencing	117,866 37
Rolling stock and machinery	335,555 44
Engineering	47,289 63
Agencies and other expenses	572,027 36
Making a total cost of	\$3,181,897 08

—or \$58,925 per mile.

Statement showing the Cost, &c., &c., of the Cheshire Railroad, from the date of its opening to the present time.

Year	Cost of Road and Equipment	Length in Miles	Cost per Mile	Gross Receipts	Current Expenses	Net Receipts	Dividend	Receipts from Passengers	Receipts from Freight	Miscellaneous	Earnings per Mile	Percentage of Gross Earnings	Percentage of Net Earnings
1848	\$1,906,466	64	\$29,632	\$80,033	\$47,068	\$32,965	12%	\$34,294	\$43,387	\$2,352	\$1,481	4.9	2.2
1849	2,618,069	64	40,907	172,106	61,080	111,026	12%	72,863	92,240	7,002	3,187	6.5	4.2
1850	2,789,818	64	43,435	208,414	92,588	115,826	12%	98,747	99,835	9,841	3,859	7.6	4.2
1851	2,777,848	64	43,410	*222,295	*99,226	*123,069	12%	101,657	110,019	10,617	4,149	8	4.4
1852	3,002,094	64	46,908	287,768	187,068	100,700	5	119,745	157,379	10,643	5,329	9.4	4.2
1853	3,076,195	64	48,065	315,299	186,596	129,703	4	128,010	182,060	10,228	5,838	10.2	4.2
1854	3,181,997	64	49,875	372,892	241,876	131,016	..	139,186	220,482	18,224	6,905	12	4.1

* Payable in stock.

+ For eleven months only.

Grand Rapids and Southern Railroad.

The Directors of the Grand Rapids and Southern Railroad Company met on the 14th inst., and organized the Board by the election of the following officers—

Joseph Lomax, President; William Ahlman, Secretary and Treasurer; J. D. Cook, Engineer.

It is the intention of the company to start the engineers on the work next week; and run an experimental line to Grand Rapids immediately. It is also the intention of the company to push the work forward to completion at as early a day

as possible. The partial failure in the wheat crop will discourage a few farmers from subscribing as liberally as they otherwise would do; but it is thought, by those posted on the subject, that a very liberal subscription will yet be obtained this summer. The importance of the work will ensure its completion. The only question about its successful completion is a question as to time. This question is in the hands of the citizens along the line of the proposed road—if they come up to the work in good earnest the time of completion will be fixed at an early day.

Vermont and Canada Railroad.

A telegraphic dispatch has been received from Mr. W. R. Lee, late President of the Vermont Central Road, stating that the Central road had been taken possession of by the Canada company, for non-payment of rent. Messrs. Lee and Eldridge, two of the Trustees, have done all in their power to hold the property for the bondholders, but it seems that they have been compelled to yield to John Smith, the third Trustee, who is acting as President of the Vermont and Canada Railroad.

American Railroad Journal.

Saturday, July 7, 1855.

Coal Burning Engines.—Locomotive "Taunton."

The rapid destruction of wood in all the Eastern States will soon leave their railroads the alternative of either burning a less expensive fuel, or of foregoing profits altogether. Up to the present time, great difficulty has been experienced in all attempts to substitute coal for wood. No accessible fields of good coking coal have been found; or at least all experiments at coking appear to have failed. Numerous attempts have been made to use anthracite, none of which are regarded as entirely successful, when applied to the general traffic; the destruction of the fire-box and tubes from the chemical and mechanical action of this kind of coal more than balancing the amount saved in fuel.

Among the leading experimenters to avoid the objections stated, is Mr. F. P. Dimpfel of Philadelphia. As his plan has been before the public for some years, it is probably pretty well understood. The main feature of the improvements claimed to have been effected by him, is the passing the water through the tubes, which is the reverse of the plan upon which locomotive engines have hitherto almost universally been constructed. Several engines upon Mr. Dimpfel's plan are now in process of construction at the Taunton Locomotive Works; and experiments made with them appear thus far to show satisfactory results. An experimental trip from Taunton to this city, and thence to Norwalk, was made last week with a Dimpfel engine. The trip between this city and Norwalk was accompanied by a large number of experts and parties interested in the result, as owners or managers of railroads. The engine on leaving Taunton took on board 7,430 lbs. of anthracite coal, with which she ran from Taunton to New York, and from New York to Norwalk and back, a distance of 360 miles, having in the meantime fired up and allowed the boiler to cool down three times. It is due to say, however, that at no time the engine had more than a partial load. By the use of wood the same service could not have been performed, except at a much larger

cost, probably one-third more. The experiment may therefore be regarded as very satisfactory; though it by no means solves the problem of the degree of economy in the use of anthracite. A long series of experiments under every possible conditions must be first made. Such, we understand, the Taunton Locomotive Company are determined to make, and from the acknowledged skill and ingenuity which are united in this company, together with ample means, the public may rest assured that the practicability of introducing coal-burning engines into ordinary use, will be thoroughly tested.

That such a result is practicable we have no doubt. Such being the case, no department of mechanical science offers such a reward as to the fortunate discoverer of the best method for the use of anthracite coal. The discoverer who bears off the prize can take for it any reasonable amount of money he may see fit to demand.

Disagreement between the Erie and Central Railroad Companies.

There has been for some time a disagreement between these roads, which has resulted in a considerable reduction of fare on each. The ground of dispute between them consists, as we understand it, in the determination of the Erie company to transport passengers between New York and any point in the Central and Western portions of the State, at the same cost at which they are carried over the Central road in connection with the Hudson River line of boats. To this claim, we understand, the Central company object, insisting that, under a previous arrangement, the Erie company are bound to maintain the same rates of fare as are charged between the same termini on the Hudson River and Central roads—that is, the Central claim that the advantage they possess in the Hudson River, which is equal to about two dollars per passenger, is not to be taken into account in any agreements or arrangements between them and the Erie for the transportation of passengers. The result is that both roads are carrying passengers from Buffalo to New York for about five dollars, which is about one-half less than was charged a few weeks since.

As it does not appear probable that the Erie company will yield a point which, if admitted against them, would be equivalent to a surrender of the through traffic to the Central for the summer season, we see no immediate prospect of a composition between the two companies, as the press is daily predicting. Neither do we think that, for the present season at least, the companies will suffer materially by the reduced prices. These only respect the through, which is certainly a very inconsiderable portion of the whole passenger traffic, on both roads, but especially on the Erie. The increase of travel will, we think, nearly if not quite make up for any loss that may be feared. Owing to the financial pressure of the past two years, our people have foregone the pleasure of travel to an extraordinary degree. Money has now become plenty, the crops are fine, our people are again beginning to feel rich, and will be likely in a few months more to make up in an increased movement for the quiet and economy of the past. We think that for the present season, neither company will lose much by their reduced rates.

As to who is in the wrong in the present in-

stance, we do not pretend to decide, having thus far but partially heard the statement of one of the parties.

La Mothe's Patent Iron Car.

This principle of construction as illustrated in the city cars—may now be inspected on the 6th Avenue Railroad in this city. In the present instance a saving in weight has been obtained of 42 per cent. over the wooden cars of the same capacity—and the principle is about to be applied to the construction of a 60 passenger car for some of the Boston Co's., who, with characteristic enterprise have united to test the advantages claimed by the inventor.

Many of the most important companies in the United States have their head quarters in New York. We hope the officers will personally examine this mode of building, and thus become interested in the experiment, by suggestions that will be valuable as coming from practical railroad men.

The Agent, Alfred Sears, Civil Engineer, may be addressed at Delmonico's Hotel.

Stock and Money Market.

There has been for several weeks past a steady improvement in the stock and money market, based in part upon the bettered condition of the country, and upon the anticipation that this improvement will continue. The losses sustained by the failure of last year's crop which were very great, will in a great measure be made up by an extraordinary abundance the present year. Business has been so far curtailed that the supply of money is quite equal to the legitimate demand.—The country was never in a position in which it was so independent of foreign communities, and never so strong financially as at the present moment. Everything, therefore, is in a condition favoring a rise in the market value of all kinds of property; and as the tendency of the public mind is from one extreme to another, it would not be strange if prices of some securities should shoot above the standard of actual value, from having been kept so long below it.

Notwithstanding the excessive depreciation of prices which prevailed a year and a half ago, the actual losses are much less than might have been supposed. Very few holders comparatively were forced to sell; while few have done so from choice. The result is that in most cases of depreciation, the owners of stocks and bonds will themselves soon be able to dispose of their securities at the cost price. Very few securities were returned from Europe for sale. Whether the fortunate result we now witness was due to confidence in the ultimate value of our roads, or in an inability to find purchasers for their securities, it matters not now, though it may teach a useful lesson to be observed on the recurrence of a similar crisis.

During the period of the greatest stringency and distrust, we repeatedly gave what appeared to us to be satisfactory reasons why the depression which prevailed would be found to be only temporary; and that the assumption on which our railroads had been built would be shown to be sound. The improvement which we already witness, with the experience that the past has developed, fully confirms the position then taken by us.

A very large amount was disbursed in this city,

We have no interest in the management of the above road, except what is due to our position as a *journalist*. If the stockholders who have, and who alone have the power to correct abuses, are satisfied, we have no disposition to complain, except so far as a pernicious example set by such a powerful company as the Michigan Central, is made use of as an apology for cloaking their misconduct by weaker ones.

In addition to an increase of construction of \$1,218,059 12, the company have also added about \$800,000 more by taking, in connection with the Illinois Central, a perpetual lease of the "Joliet Cut-off," (a road, 44½ miles long) at an annual rent of \$2,000 per mile. The value of the road is yet a mere matter of opinion. We think it will be less and less valuable every year the company hold it. A road to "cut off" travel from New York would have just as much merit as one to cut off travel from Chicago. But there was a much stronger reason against taking it, in universal experience which has demonstrated over and over again, that all investments made in running after business result in loss. A moment's reflection will convince any one that such must be the result. No business but such as freely offers itself ever pays in any of the departments of trade or commerce. The moment it has to be sought, it is impossible to estimate what are to be the expenditures to secure it, or to estimate the ratio of expense to profit. This chasing after business is worse than making an additional investment, for the purpose of securing an old debt; an experiment which we never yet knew to succeed. These are the chimeras which are the favorite pursuits of senility, or unripe years, and have been the great object of the expenditures of the Michigan Central for years. They account for the enormous cost of the road, and for the unwillingness of the managers to show how and where the company's money has gone. If they can show, we do not believe they have the courage to do so. That vast sums have been wasted we have no doubt. We see no hope for the future so long as the stockholders allow the managers to go on as they have, and their reports be such as may serve for a cloak behind which every kind of venality and misconduct may riot in impunity.

Pacific Mail Steamship Company.

The following statement taken from the balance sheet of this company's last report, shows their financial condition at the 1st of May, 1855.

ASSETS.	
Steamships.....	\$2,838,537 53
Storeships.....	98,223 20
Machinery at Benicia.....	41,907 99
Real Estate.....	597,242 35
Coal at various points.....	458,663 00
Outfits and supplies.....	187,818 56
Miscellaneous, consisting of balance in hand, policies, stock, and accts. due.....	277,375 85
Deficit, 3-7-8 per ct.....	140,915 14
	\$4,568,683 62
LIABILITIES.	
Capital stock.....	\$3,661,000 00
Bonds redeemable Sept., 1856.....	294,000 00
Pacific Mail Steamship Co.—old account.....	163,875 96
Interest due on above.....	3,640 00
Howland and Aspinwall.....	429,376 84
Interest due on above.....	10,500 00
Sundry small accounts.....	6,290 82
	\$4,568,683 62

The receipts from 10,277 passengers, for the seven months ending 30th April, amounted to \$1,173,083. The receipts from Panama to San Francisco exceeded those of the return voyages by \$188,000. The number of steamers exclusively owned by the company is 14. One of these, the St. Louis, is now employed on the Havre route.

The report states that the deficit is \$278,178,

less than on the 1st of October, 1854, when it amounted to \$428,094. This reduction of the floating debt has been equal to a dividend of 7 per cent. on the above period, though none has been declared. Much of the report is occupied with a discussion of the difficulties experienced with the Nicaragua Transit Company. The agreement made on the 1st October last, provided for alternate voyages of each company's vessels, the proceeds being equally divided between each company, until a further arrangement should be made. Under this agreement the Nicaragua company received from the P. M. S. Co., for equalizing receipts, the sum of \$62,577 94. In April last, the former publicly offered to transport passengers and freight at reduced rates, without, it is affirmed, any real breach of contract on the part of the latter.

The expenses of a single trip between Panama and San Francisco are stated to be over \$30,000; besides, agencies, repairs, insurance, &c., &c., which amount to seven or eight thousand additional. The annual cost of insurance is \$170,000. The opening of the Panama Railroad has given the company an increase of freight, and affords them excellent facilities for coaling and other purposes. The company now keep a steamer at Panama constantly ready. Large quantities of coal have been collected at San Francisco, and other points.

The report does not state what the expenses have been, but leaves them to be inferred from the statement of gross earnings and net receipts. We are at a loss, therefore, to know what expenses cover; whether anything more than current expenditures; whether depreciation is included, and how much; and whether the expenditures for the past six months are likely to be increased or diminished. Mr. Aspinwall states the expenses of the round trip to be \$76,000, which, for six months, would amount to \$988,000, which deducted from the gross receipts, would leave \$185,000 for net earnings, instead of \$287,178 as given in the report. As the company own 14 steamers, the depreciation probably far exceeds the net income, so that the business for the past six months was done at a loss instead of a profit. As many of the steamers are now getting old, the prospect of future dividends appears to us to be exceedingly small.

The above is one of the instances in which selfishness has overreached itself. The original company commenced business with a monopoly which was used to extort every cent from the public. Enormous apparent profits were made, while the sums yearly paid to agencies were equal to fortunes. Such gains could not fail to provoke rivals, which had either to be bought up, or bought in, at a cost which has reduced profits below a living rate. In the first place the public suffered, now the boat-owners. The great losses unluckily do not fall upon those who made this money, but on those who sought to share profits with them. Had the original lines been conducted upon a principle of wise economy, content with supplying fair accommodations at a reasonable profit, the business might have been uniformly good. But, unfortunately, the getters-up of the original line had neither public spirit, philanthropy, nor the highest business sagacity. The consequence is they have ruined the business, and incurred the censure of those

whose money they have lost, without gaining the least foothold in public esteem. It has been a selfish game throughout which is always a losing one.

However largely California enterprizes paid in the outset, the tendency from the start was to come down to the ordinary level of profit, and in fact to go as far below this standard as it had been exceeded. But while profits cannot be kept up, expenses cannot be reduced. The amount paid to agencies would alone forbid the idea of profit, and the continuance of them shows that the company neither appreciate their condition, nor know how to extricate themselves from the dilemma in which they are placed.

Illinois Central Railroad.

This work, its capacities for business, the value of its lands, and its prospective income, have been recently made the subjects of careful personal examination by quite a number of leading parties in railway negotiations, among whom were several gentlemen connected with foreign houses, and some of them previously unfavorably impressed in reference to this project. These examinations have, we believe, without exception, resulted in a conviction favorable to the success of this great work. Its business bids fair to be remunerative, while the company's lands promise to realize a much larger sum than we supposed they would produce. If they do not entirely discharge the company's indebtedness, which amounts very nearly to the cost of the road, they will go so far toward doing it as to leave a very considerable portion of the stock a bonus to the holders.

A result which now appears pretty easily demonstrable, we confess, far exceeds our expectations, and is due to causes the effects of which were not sufficiently appreciated, while the road was in progress. One of these is the demand for land created by the immense emigration from the continent of Europe.—Another, the extreme high prices of grains of all kinds, for which the country chiefly relies upon the West. The value of lands keeps pace with the value of their products. A railroad is equivalent to a market to a farmer by whose doors it runs. The Continental emigrant, the moment he lands in New York, sets his face toward the West. His first ambition is to become an owner of its soil, and his first occupation is that of a farmer. Most of the German immigrants, a class who now compose the majority of the whole foreign population coming to this country, bring with them sufficient means to commence farming in a very respectable manner. To the pioneer the *Prairie States* offer great attractions, as the soil can, with a minimum amount of labor, be brought under immediate cultivation, and produces for years without diminution and without the necessity of manuring. Upon the prairies no combination is necessary to render labor productive; the unaided labor of one man producing very nearly as much as when joined to that of a hundred others. No long preliminary operations are required, before any return can be realized. The settler who arrives out in season to turn over the soil in the Spring, is secure of reaping a harvest in the Fall, which not only puts him beyond the reach of want, but places in his hands means sufficient to enlarge his operations the coming year. The degree of value of his products depends upon the cost of transportation to market. The

difference of ten cents per bushel on those of an acre devoted to wheat or Indian corn (which is the cost of transportation for 15 or 20 miles over the ordinary highway) very soon amounts to as much as the Illinois Company charge for their lands. These facts will explain the reason, why they can sell their lands at ten and fifteen dollars per acre, notwithstanding equally fertile lands are on sale by the General Government, but which are far removed from avenues to market.

Another reason for the rapid appreciation of the new lands of Illinois, is the favorable position of the State in reference to the two great markets of the country for its products—the Eastern and Southern. The Southern planting States depend upon the grain-growing Western States for their supplies of breadstuffs and provisions. Illinois has thus a choice of market constantly before her, and probably sends quite as large a proportion of her exports down the Mississippi, as to the Eastern cities. The latter markets can be reached from the central portions of this State at just about the same cost as from the interior of Ohio and Indiana. The former possess equal, if not greater commercial facilities than the latter. It is then superior in the fertility of its soil, and vastly so in the value and extent of its mineral deposits. Two-thirds of its surface is underlaid with coal, which must in time become perhaps a greater element than its soil in promoting its progress in wealth and population.

The present managing parties of the Central are well spoken of—as gentlemen of integrity and capacity, who thoroughly appreciate the interests of the company and the wants of the public, who are competent to a successful management of the road, and who will conduct its affairs with entire fidelity to the interests of the stock and bondholders. This conviction has contributed much to the favor with which its securities are now held. Under all these favorable circumstances, we think, we may assure the real builders of the road, the bondholders, that they hold a good security.

Scioto and Hocking Valley Railroad.

The company owning this work organized under the General Railroad Law of Ohio. By the special charter passed in 1848, they were empowered to construct a railroad from the town of Portsmouth, on the Ohio river; thence on the east side of the Scioto river by way of Piketown, Chillicothe, Circleville, Amanda, and Lancaster, to Newark. Authority was given to unite with other roads. The capital stock was to consist of any amount not exceeding \$2,000,000. The gauge of road might be made of any such width, not exceeding five feet four inches, as would be necessary for conforming to that of any road with which it should connect. By an amendment, passed in 1851, the company were authorized to construct their road through any part of the counties of Ross, Pickaway, Vinton, Hocking, and Perry; and the Commissioners of the above counties were empowered to subscribe to the company's stock, subject to the ordinary restrictions and regulations.

This road will be, when completed, 135 miles long, forming in connection with the Sandusky, Mansfield, and Newark road; a great North and South line through the central part of Ohio. The importance of the S. & H. V. road is owing to the fact

that it traverses the extensive coal and iron regions of Ohio, nearly through their midst. These deposits cover a large portion of the State to the south and east of Newark. The supply of coal may be fairly pronounced inexhaustible, as within the limits of Ohio it has a greater superficial extent than in the United Kingdom. There are two varieties of this article—the cannel and the bituminous. Numerous iron-making establishments have long occupied the banks of the Ohio; but the want of exporting facilities prevented the more extensive manufacture of it. To provide sufficient outlets for these great staples, as well as the extensive agricultural products of this region of the State, by means of the various lines which this road will intersect, was the great object of this work.

The company were organized in May, 1849, by the election of J. V. Robinson as President. Mr. J. W. Webb was shortly after appointed their Chief Engineer, under whom the surveys and location of the line were commenced. It was the first intention of the managers to locate the road directly up the Scioto Valley by Piketown, Chillicothe, and Circleville; but this route was subsequently changed to one running more directly through the mineral region. At present it follows the Ohio river to Sciotoville, and thence proceeds up the valley of the Little Scioto to Jackson, whence it crosses the table land to Lancaster, and there strikes the Hocking river, advancing along its bank to the terminus at Newark.

The principal engineering difficulties consist of a heavy cut at Somerset; a tunnel, 2,400 feet in length, 12 miles south of Somerset; and the "Five Mile Summit," 9 miles south of Logan. The last is a heavy rock cutting. The tunnel penetrates a sandstone ridge its whole length.

The estimated cost of the road, including equipment, was \$2,600,000, or \$19,000 per mile.

That part of the line between Portsmouth and Jackson, 44 miles, was put under contract in 1851; and the remainder in 1853; the contractors taking in part payment the company's stock and first mortgage bonds. The whole was to be completed by the 1st of July, 1855.

In 1852, the managers issued a first mortgage of \$300,000 on that portion of the road between Portsmouth and Jackson. This was followed, in March, 1853, by an issue of seven per cent. convertible bonds to the amount of \$1,000,000, payable in 1865. These latter were designed to be a first mortgage on the extension to Newark, and a second on that part between Portsmouth and Jackson. About \$100,000 of these have been sold. The first 44 miles were opened for business, in the fall of 1853.

By the last report of the Directors, made on the 9th of May, 1855, there are 43½ miles open, the cost of which, including machinery and repairs to date, was \$888,858 48. The means on hand for further operations were \$132,857 99.

The earnings on the 44 miles in operation for the twelve months ending 30th April, 1855, were—

From Freight.....	\$58,974 18
Passengers.....	25,994 46
	\$84,968 60
Working Expenses.....	25,220 58
Leaving as net income.....	\$58,848 02

The work on the remainder of the line proceeded

steadily till the latter part of 1853, when the pressure of the times obliged the managers to reduce their force considerably. At the present time, the iron is laid on twelve miles, the grading, on the forty miles beyond Jackson, is in a state of forwardness, and that on the 24 miles south of Newark completed. The work on the Tunnel has been for some time under way. The other excavations are two-thirds completed. Except the Tunnel, it is estimated that the whole work can be finished within eight months, and the Tunnel, under favorable circumstances, may be opened in six or eight months longer.

The machinery consists of 4 locomotives, 3 passenger cars, 2 baggage cars, 42 eight-wheeled, and 21 four-wheeled cars. That part of the road in operation is said to be in excellent condition.

The following are the liabilities of the company, at date of last report—

Amount of stock subscriptions by the city of Portsmouth, the counties of Scioto and Jackson, and individuals.....	\$408,375 00
First Mortgage Bonds.....	300,000 00
Second Mortgage Bonds, and First Mortgage on the extension.....	100,000 00
Income Bonds issued, payable June 1st, 1859.....	19,000 00
Bills payable, and other indebtedness.....	90,050 00
Net earnings of the road, deducting running expenses.....	108,691 47

\$1,021,718 47

The estimated amount required to complete the work, including the Straitsville branch of 64 miles, is \$1,168,650.

Monster Iron Steamship.

There is now being built on the Thames in England an iron steamer designed to eclipse any piece of naval architecture—Noah's ark included—that has ever floated. This vessel, to be called the "Great Eastern," is to be 22,500 tons burthen, and to carry upwards of 12,000 passengers, having a capacity for coals and other cargo of something like 18,000 tons. The construction of this enormous leviathan was designed by, and is under the charge of Mr. Brunel, the well known engineer of the Thames Tunnel. The company owning her have a capital of some \$6,000,000, of which about \$2,500,000 have been paid in.

This vessel is to carry five masts, in addition to both paddle wheels and a screw. She is expected to make an average of 15 knots an hour in all weathers. The builders expect to have her finished in a year, when, it is said, she will pay us a visit, in order to impress us with the littleness of our "Great Republic," previous to her final destination which is understood to be the Australian trade. She is built in numerous compartments, and the inside hull, so to speak, which is some feet from the outside one, is lined with India rubber so as to be perfectly water-tight, should the outer one be injured by any accident.

The principal dimensions of the ship, her capacity, and power, are as follows:

Length.....	feet 630
Breadth.....	88
Depth from deck to keel.....	60
Length of principal saloons.....	400
Height of ditto.....	15
Number of decks, 4.....	
Tonnage, 22,500 tons.....	

Carries of coal and cargo, 18,000 tons.
 Nominal horses, power, Screw, 1,600 horses.
 Do. do. Paddles, 1,000
 Cylinders for paddle engines, 4.
 Diameter of cylinder in inches, 74.
 Length of stroke, 14 feet 6 in.
 Draft of water (loaded) feet, 28.
 Do. (light) do. 20.
 Carries of first-class passengers, 600.
 Do. second-class do. 1,800.
 Do. troops, with field equipments, 10,000.
 Weight of iron used in the construction of the ship, 10,000 tons.

Mr. Brunel, in his report, speaks first of all of the mode of launching the ship, a subject of great importance, considering the dimensions and weight of the vessel, and the narrow and shallow river in which she is to make her first acquaintance with the waters of the sea. The intelligent and well expressed conclusions of Mr. Brunel as to the mode of launching are thus stated—

"One of the first points to be decided, was the mode of launching the vessel, which, of course, would determine the position in which it was to be built, and I wish to take this opportunity of explaining my reason for adopting the plan I have decided upon, which, being unusual, might be supposed to be unnecessary.

"Vessels are generally built above the level of high water, and then allowed to slide down an inclined plane into the water; occasionally, as in the case of the Great Britain, they are built in a dry dock, into which the water is afterwards admitted, and they are floated out.

"Both plans were well considered in the present case; but the size of the dock required, the difficulty of finding a proper site for such a dock, the depth required for floating a ship with her engines and boilers, which it was most desirable to introduce while building the hull, and the depth of channel required to communicate between such a dock and the deep water of the river—all combined to render the dock plan a very expensive, and considering the nature of the soil in which it would have to be formed, a somewhat hazardous proceeding. Launching seemed to offer the fewest difficulties and the greatest certainty; but the dimensions of the vessel required some modifications of the usual modes of proceeding.

"Launching is generally effected by building the ship on an inclined plane, which experience has determined should be at an inclination of about 1 in 12 to 1 in 15, the keel of the ship being laid at that angle, and the head consequently raised above the stern, say 1-15th of the whole length of the ship. In the present case, this would have involved raising the fore part of the keel or the fore foot about forty feet in the air, and the forecable would have been nearly 100 ft. from the ground; the whole vessel would have been on an average 22 feet higher than if built on an even keel.

"The inconvenience and cost of building at such a great height above ground may be easily imagined, but another difficulty presented itself which almost amounted to an impossibility, and which has been sensibly felt with the larger vessels hitherto launched, and will, probably, ere long, prevent launching longitudinally vessels of great length. The angle required for the inclined plane to insure the vessel moving by gravity being, say 1 in 14, or even if it was diminished by improved construction to 1 in 25, is such, that the end first immersed would become waterborne, or would require a very great depth of water before the fore part of the ship would even reach the water's edge. Vessels of 450 or 500 feet in length would be difficult to launch in the Thames, unless kept as light as possible, but our ships could not be so launched, the heel of the sternpost being required to be, as I before said, about 40 feet below the level of the fore foot, some mitigation of the difficulty might be obtained by an improved construction of the ways; but the great length of way to be carried out into the river, would, under any circumstances, be a serious difficulty.

"These considerations led me to examine into

the practicability of launching or lowering the vessel sideways; and I found that such a mode would be attended with every advantage; and, so far as I can see, it involves no countervailing disadvantages. This plan has been accordingly determined upon, and the vessel is building parallel to the river, and in such a position as to admit of the easy construction of an inclined plane at the proper angle down to low water-mark.

"In constructing the foundation of the floor on which the ship is being built, provision is made at two points to insure sufficient strength to bear the whole weight of the ship when completed.—At these two points, when the launching has to be effected, two cradles will be introduced, and the whole will probably be lowered down gradually to low water-mark; whence, on the ensuing tide, the vessel will be floated off. The operation may thus be performed as slowly as may be found convenient; or if, upon further consideration, more rapid launching should be thought preferable it may be adopted."

The next point to be considered is the progress of the work. The Great Eastern is not a mere theory, but an actual fact. The work is really and rapidly progressing, and should no unforeseen obstacles arise, it is expected that the ship will be launched before next Christmas. A deal of time was necessarily expended in making suitable preparations for the work, and erecting the machinery in the builders' yard for shaping, punching, planing and cutting the plates, and for bringing so large an undertaking into working order. The first plate was laid in May last, and at the present time 500 men are at work upon the ship in all departments. Unlike other vessels, the keels of which are laid and the framing erected therefrom and plated over, the "Great Eastern" is building in sections, the midship section being first built up to its full altitude, and the iron decks laid, and the other sections, fore and aft, being successively built in like manner, and joined to the preceding section. A number of these sections are built, the model of the stern port is erected, and the riband, or outline of the after part of the ship, is already put up.

In her external appearance, drawing the inference from the working model, we should say the Great Eastern will be a slightly ship. She is moulded with very fine lines forward and aft, and she will have an elliptical stern.

Her deck is to be flush, except for cabin entrances and similar purposes, so that a promenade more than twice the length of the Great Britain's deck will be available for the passengers on board this ship, and which from her great size, ought at all times to be free from shipping water.

If the reader will imagine a ship built of any size, and then a smaller ship built and placed in the larger, he will form some idea (though not a full one) of the Great Eastern.

Perhaps the best terms to describe these inner and outer ships is to call them the inner and outer skins. The distance between the inner and outer skin, or ship, is 2 feet 10 inches. The floor of the ship, as previously stated, is perfectly flat, the keel being turned inwards and riveted to the inner ship's keel. These several skins are joined to each other by longitudinal webs or girders, formed of plate and angle iron. There are seventeen of these webs on each side of the ship, which run the entire length of the vessel, and they are placed at such distances as to extend upward, at intervals of about three feet, from the keel to the main deck, and they are again closed up in lengths varying from 20 to 60 feet. Thus the outer and the inner ships are joined together by means of a great number of water-tight webs or cells, of extraordinary strength, giving the vessel a rigidity such as has never been communicated to a ship before. The main deck is treated in the same manner for a width of 20 feet on each side, and iron girders bind one side to the other, so that the entire vessel becomes, as it were a beam of strength, and the whole fabric may be denominated a web of woven iron, the rivets forming the fastenings; and the webbed or honey-comb cells

becoming an indissoluble structure. The compartments between the outer and inner skin will hold 8,000 tons of water ballast, should it be required. The web plates are of inch iron, and the outer and inner skins are of three-quarter inch iron.

Mississippi Central Railroad.

Mr. Green, the Chief Engineer of this road, expresses very confidently the opinion that, by the 4th of July next, the cars will be running to Holly Springs.—On the 1st day of January next, the contractors will commence laying down the rails from Holly Springs in the direction of Oxford, and at the same time from Canton in the direction of Lexington. On the 1st day of April next, saving accidents, the Central Railroad will be in operation from Memphis to Oxford.—*Brandon Rep.*

Pennsylvania Coal Company.

The stockholders of the Pennsylvania Coal Company on the 13th inst., elected Directors for the ensuing year as follows: John Ewen, Isaac L. Platt, Mosses Taylor, W. R. Griffith, Irad Hawley, Wm. F. Havemeyer, Wm. H. Falls, Charles Morgan and George A. Hoyt. John Ewen has been chosen President and E. H. Mead, Secretary.

Michigan Central Railroad Company.

Report of the Directors to the Stockholders.—With this, you have the report of Mr. Livermore, the Treasurer, and Mr. Rice, the Superintendent, showing the details and the results of our operations for the year ending May 31st, 1855.

Some of the principal items in the operation of the last two years compare as follows:

	Year ending May 31, 1854.	Year ending May 31, 1855.
Earnings from Passengers.....	\$855,917 94	\$1,246,409 00
Do. from Freight.....	673,019 70	900,446 03
Earnings from Miscellaneous.....	50,475 00	68,428 70
Gross Earnings..	\$1,579,412 64	\$2,215,283 73
Operating Expenses, including State Taxes.....	\$903,944 38	\$1,335,627 48
Net Earnings....	\$675,468 26	\$879,656 25
No. of Way Passengers.....	245,028	345,138
No. of Through Passengers.....	112,908	158,636
Total No. of Passengers.....	357,936	503,774
No. of tons of Freight moved.....	216,583	241,825
No. of miles run by Engines.....	1,150,000	1,292,739
Engines per mile run.....	\$1.38	\$1.71

The receipts for the year differ in a small degree from the earnings, the difference growing out of the greater or less amount of uncollected earnings outstanding at the date of the report.

The receipts for the year ending May 31st, 1855, were.....\$2,261,936 62
 Surplus Income, June 1st, 1854.... 12,191 89

\$2,274,128 51
 Operating expenses for same time.. 1,335,627 48

Net receipts..... \$938,501 03

This amount has been disposed of as follows:

Interest and coupon account.... \$360,903 48
 Dividend, 6 per cent..... 340,860 00
 Surplus on hand this day..... 236,737 55

The increase of passenger earnings has been 46 per cent., and of freight 34 per cent.

Increase of gross earnings 40 per cent., and of operating expenses 48 per cent.

The cost of our road from Detroit to its junc-

tion with the Illinois Central Railroad, in Illinois, 269 miles, including very valuable depot accommodations in the city of Chicago, has been.....\$10,300,147 03
In addition to which we have in steamboats.....343,880 04
Stock and Bonds in the New Albany and Salem Railroad Company, which it is believed will ultimately be valuable, though not available at present.....599,763 99
Construction Bonds of the Illinois Central Railroad, which can be sold at certain periods in 1856, the par value of which is amply guaranteed to this Company.....800,000 00

As this road has assumed a magnitude in length and capacity, cost and earnings, not originally anticipated by some of its friends, it may not be improper at this time to take a short view of its rise, progress, and present position.

The road was commenced by the State, and constructed with the wood and flat bar superstructure as far as Kalamazoo, 143 miles from Detroit, when in 1846 it was purchased by capitalists, from New York and New England, for two millions of dollars. The charter was drawn with great care, and is in the nature of a contract with the State, containing valuable rights and privileges, for which a large portion of the pecuniary consideration was paid. Any controversy with regard to such rights and privileges is thus brought within the jurisdiction of the United States Courts. The evident design of the State was to make a road across the Peninsula only from Detroit to Lake Michigan. It was apparent to the purchasers that, with the great and growing West beyond, the ultimate interest of the Stockholders, though perhaps temporarily suffering, would be promoted by the construction of a more permanent work, of large capacity, and its extension through the north end of Indiana to Chicago.

The charter of this company, with its subsequent amendments, gave ample power to accomplish the desired purpose, but through Indiana and in Illinois they had no charters.

To get through Indiana an arrangement was made with the New Albany and Salem Railroad Company (which possessed the legal right) to extend their road from the Southern part of the State to our line at Michigan City, and permit our company to use its right to build from thence to the State line at Illinois. To do this required the large investment before named in the securities of that company, which we have carried at a considerable sacrifice, and, until the line was opened for through business, without any return or business advantage. We have, however, with that company very valuable running arrangements, which, now that their line is opened through, are beginning to be felt in our earnings. We regard this road as a valuable feeder to ours, and trust we shall ultimately realize such a sum for our securities in that company as to show the value of the connection to have been cheaply purchased.

To reach Chicago we had no charter in the State of Illinois, and made an arrangement with the Illinois Central Railroad Company, by which our line is used by both companies. Had we a charter for this portion of our line, it would have been very questionable whether it were wise to construct an independent line, with its very expensive entrance into that city, which could not have been done and so good a location for depots reached for less, probably, than one million dollars. To effect this and to secure very valuable permanent running and ticketing arrangements with them, required large advances to be made to that company. These advances, though collaterally well secured, had to be carried through the late money pressure at a large sacrifice to this company. We believe, however, the fruits of this sacrifice will be an ample reward.

The depot location in Chicago is upon the lake shore, at the mouth of the harbor, as close as possible to the very centre of business. The freight

grounds are owned separately by the two companies, and the passenger accommodations jointly in equal parts. The passenger depot now constructing is 500 feet long and 167 wide, the roof to make a clear span of the whole width. Into this depot will concentrate the trains of the Galena Branch of the Illinois Central road, connecting by steamboats with the whole of the Upper Mississippi Valley, the trains of their Chicago Branch connecting at Cairo with steamers for the lower Mississippi and New Orleans, the trains of the St. Louis and Chicago lines, and such other lines as may in time avail themselves of so extensive and central a position. The business of nearly 1500 miles of railroad and their extensive steamboat connections coming into one terminus at Chicago will add very much to the business of our line, as its eastern outlet.

During the past year the Joliet and Northern Indiana Railroad has been so far completed that it will be brought into use before the close of the present month. This line commences at Lake Station, on our road and extends almost due west, about 44½ miles to Joliet, as will appear by the accompanying map, which is the Northern terminus of the Chicago, Alton, and St. Louis Railroad. It also connects at that point with the Rock Island Railroad, giving to that line a better eastern outlet than they can get by any other route. Twenty-four and a half miles west of Lake Station, this line crosses the Illinois Central Railroad. By it we reach the business of some 350 miles of that road, with its Lower Mississippi steamboat connection, with a saving of 38½ miles over their route, via Chicago. We reach the Chicago, Alton, and St. Louis line and save 31 miles over their old route, and the Rock Island road at a saving of 31 miles. Besides the great amount of through business which must come over this line, giving, as it does, a shorter outlet than any other for several large lines of railroads, the country through which it passes is very fertile, especially the western part of it, and much advanced in settlement and cultivation, which will furnish a good local business, a large portion of which will find a market through our road at and east of Detroit.

That road was last September leased by this company under a perpetual lease, for two thousand dollars per mile per annum. The road to be constructed in every respect as well as our road in the State of Indiana. Subsequently, at the desire of the Illinois Central Railroad Company, (a large portion of whose business going over our road will pass by this line) one half of said lease was taken by them and it is now owned jointly.—Each company is therefore to pay one half of the \$89,000 rent. Besides securing very advantageous connections to both companies, we believe the line will yield more net profit than the rent amounts to.

Since the last Annual Report, the New Albany and Salem Railroad has been opened its whole length, 288 miles, from Michigan City to the Ohio River.

The Joliet and Northern Indiana road will be put in operation during the present month.—Whether the large expenditure our company has made to reach the sources of business in the great West has been judicious, whether the anticipations are to be realized is now to be determined; certain it is that the principal original holders of the stock have in the main largely increased their interests and evinced a purpose to await the result of their steadily pursued plans and policy, and we doubt not that result will at least meet their just expectations.

A portion of these new sources of revenue have been brought into use the present spring.

The earnings compare with last year, as follows:

	1854.	1855.	Gain.
March.....	\$118,257 71	\$161,054 01	\$47,796 30
April.....	145,156 07	235,484 79	90,328 72
May.....	200,020 02	293,388 51	93,318 49
	\$458,433 80	\$689,927 31	\$231,443 51

Although we do not expect this percentage of gain to hold so large as the past three months, we have no reason to offer why it should not be very large through the present year, or why the new lines yet to be opened during the coming season will not produce a considerable increase in the business of 1856 over that of the present year.

By order of the Board,
J. W. BROOKS,
Vice President.

The following general account is copied from the report of the Treasurer.

GENERAL ACCOUNT.	
To Capital Stock.....	\$6,021,916 00
Bond Account, 6 per cent. Sterl. Bonds, unconvertible.....	\$463,613 33
8 per cent. Sterl. Bonds convertible.....	500,000 00
8 per cent. Bonds, unconvertible.....	1,442,450 00
8 per cent. Bonds, convertible.....	3,188,000 00
	5,594,063 33
Income Account Balance of this Account.....	236,737 55
Bills Payable and Receivable Balance of this Account.....	315,222 56
	\$12,163,989 44

Cr.	
By Construction No. 1, Purchase of Road.....	\$2,000,000 00
Construction No. 2, Expenditures since purchase.....	8,300,147 03
Cash on hand.....	11,331 64
Assets in hands U. T. Howe, Local Treasurer.....	51,284 13
Assets in hands R. N. Rice, Superintendent.....	57,552 61
New Albany and Salem Railroad Company Stock and Bonds.....	599,763 99
Illinois Central Railroad Company Bonds.....	800,000 00
Steamboats.....	343,880 04
	\$12,163,989 44

ELLIOTT & CO., NO. 4 WILLIAM STREET, NEW YORK.

(ONE DOOR SOUTH OF BRAVER STREET.)
RAILROAD AGENTS

AND
COMMISSION MERCHANTS,

PURCHASE AND SELL ON COMMISSION
FOR RAILROAD COMPANIES.

RAILROAD IRON—They contract upon the most favorable terms for the delivery of Rails either on board ship in England or in the United States.

LOCOMOTIVES & CARS—Having connection with some of the best builders, they furnish the best at the lowest rates for cash or good paper.

WHEELS & AXLES—They are Agents for two of the best Forges, and one of the first Wheel Makers, and can supply orders with promptness and to give satisfaction.

CHAIRS & SPIKES—They are authorized to sell wrought and cast iron chairs and spikes from the best known makers at the lowest rates.

All orders will be promptly filled and at the lowest market prices.

CAR FINDINGS in variety.

Railroad Secretaries are particularly requested to forward by mail copies of their Reports from the first

ELLIOTT & CO.,
No. 4 William st., N. Y.

H. SCHLARBAUM,
390 Broadway corner Reads st.
SURVEYORS' LEVELS, COMPASSES and other Mathematical Instruments made with great care and for sale at low prices. Repairs done in the best manner.

CAR, LOCOMOTIVE, AND TENDER SPRING MANUFACTORY.

We beg leave to present the following Certificates to the consideration of Railroad Companies and Car Builders, for the quality of CAR, LOCOMOTIVE, AND TENDER SPRINGS manufactured by us.

At the same time we would inform Railroad Companies and Car Builders that we have extended our works, and will be happy to execute any orders for Steel Springs for Cars, Locomotives, or Tenders, of any design or pattern which they may see proper to intrust to us, at the lowest prices, and on terms which will prove satisfactory.

From our long experience as Spring manufacturers, we are enabled to supply Railroad Companies with Spring Steel, of superior quality, converted from Swede Steel Iron.

The iron being imported direct from Stockholm by ourselves, and Converted and Rolled under our supervision.

Yours respectfully,

JAMES JEFFRIES & SON,
REAR OF GIRARD HOUSE.

Philadelphia, Feb. 27, 1852.

Messrs. JAMES JEFFRIES & SON,
Gentlemen: In reply to your inquiries as to the character of the Springs furnished by you for Locomotive Engines and Tenders, I take pleasure in saying that I have found them, both in material and workmanship, superior to anything else of the kind that ever came under my notice. I have occasionally tried the Springs of other manufacturers, but in testing their elasticity and strength with the apparatus I have for that purpose, I have found none combining the requisites of a good spring, viz., lightness, elasticity, and durability, in so eminent a degree as yours.

I am using them exclusively under the Engines and Tenders of my make, and can safely recommend them to others.

Yours truly, M. W. BALDWIN.

Office, Penn'a Rail Road Co.

Philadelphia, Feb. 26, 1852.

This is to certify, that James Jeffries & Son manufactured nearly all of the Steel Springs used on the Georgia Rail Road while I had charge of that work, and have also furnished those that have been used on the Pennsylvania Rail Road. The character of their work has always given entire satisfaction, and I cheerfully recommend their Springs to the patronage of all Rail Road Companies and Car Builders.

J. EDGAR THOMSON,

Chief Engineer and President Penn'a Rail Road Co.

Office, Phila, Germantown & Norristown R. R. Co.

February 23, 1852.

This is to certify, that I have used the Steel Springs manufactured by Messrs. Jas. Jeffries and Son, for the Locomotives, Passenger, and Freight Cars of the above Road, during the last 15 years, and have always found them good and efficient Springs, giving general satisfaction.

R. FRENCH.

Philadelphia, Feb. 23, 1852.

This is to certify, that we have used Car Springs made by James Jeffries & Son, for the period of twelve years, and find them a very superior article, so much so, that we shall always continue to use them.

DUTILE, HUMPHREYS & CO.

Proprietors of Union Line of Trans. from Phila to Pittsburg

Philadelphia, Feb. 27, 1852.

Messrs. J. JEFFRIES & SON,
Gentlemen: We have been using your Steel Springs under our Cars for a number of years, they have given entire satisfaction, and have proved themselves superior to any other that we have used. Their good qualities should commend them to any who have need of an article so difficult to obtain perfect.

Yours truly, HARRIS & LEECH,

Proprietors of Leach's Trans. Line from Phila to Pittsburg.

Richmond, Jan. 6, 1852.

Messrs. JEFFRIES & SON: It affords me pleasure to say, that after some six or seven years' trial of your Springs, I find them superior to any other Springs we have used on our road, and are so well satisfied with their merits as to continue the use of them.

I am, very respectfully yours,

THOMAS SHARP,

Superintendent R. P. & P. R. R.

Office, R. & P. R. R. Co.

Richmond, Va., Jan. 6, 1852.

To Mr. THOMAS JEFFRIES,
Dear Sir: I take pleasure in stating that the Springs made by the firm of which you are a member, and which I have been using for the last eight years on Locomotives and Tenders, and also, on Passenger, Freight, and Coal Cars, have given the utmost satisfaction, and I consider them superior to any I have received from other establishments during the above period, and shall still continue to send you our orders for all we may want.

Very respectfully yours,

THOMAS DODAMEAD,

Superintendent R. & P. R. R.

Superintendent's Office, C. R. R.

Savannah, Ga., Jan. 21, 1852.

This will certify, that Car and Locomotive Springs made by Messrs. James Jeffries & Son, of Philadelphia, have been in use on this road for a number of years, and have given entire satisfaction.

W. M. WADLEY,

Superintendent.

Philadelphia, March 1, 1852.

Office, Petersburg R. R. Co.

Petersburg, Jan. 8, 1852.

The house of James Jeffries & Son, of Philadelphia, has made us a good many Car and Engine Springs, and I take great pleasure in stating that they have always turned out well, and I believe their work can not be surpassed by any in the country.

H. D. BIRD,

President.

Office, Sup't T. & M. Power, So. Ca. R. R. Co.

Charleston, Jan. 21, 1852.

This is to certify, that the South Carolina Rail Road Company have for a number of years been using the Steel Springs manufactured by Messrs. J. Jeffries & Son, of Philadelphia, for their Locomotive Engines, and for both Passenger and Freight Cars, and I take pleasure in stating that they have given entire satisfaction, and recommend them to the patronage of all Rail Road Companies requiring such articles.

J. D. PETCH,

Sup't Trans. & Motive Power So. Ca. R. R. Co.

Philadelphia, Feb. 27, 1852.

This is to certify, that I have used Springs made by James Jeffries & Son for the period of five years, and consider them equal, if not superior to any others that I have had in use.

JOSEPH S. LEWIS,

Pennsylvania & Ohio Land.

Georgia Rail Road,

Augusta, Ga., Jan. 1, 1852.

To whom it may concern.—We have used Springs manufactured by Messrs. James Jeffries and Son, for the Locomotives and Cars of our road for the last ten years, and have no hesitation in recommending them as having given general satisfaction.

F. C. ARMS,

General Superintendent.

Macon & Western Rail Road,

Macon, Ga., Jan. 25, 1852.

Messrs. J. JEFFRIES & SON,
Gentlemen: This Company has for several years purchased and used, under Cars and Engines, Steel Springs manufactured by you. We have also purchased from other manufacturers and made Springs ourselves.

Yours have given entire satisfaction, and have proved themselves equal, if not superior to any we have used. Their excellent qualities should commend them to all who have need of an article so difficult to obtain in perfection.

Yours, very respectfully, EMERSON FOOTE,

Superintendent.

Macon, Ga., January 24, 1852.

Messrs. JAMES JEFFRIES & SON,
Gentlemen: In reply to your inquiries in reference to Steel Springs, I take pleasure in saying, that I have been in the way of observing Springs in use on Cars and Locomotives, on various Rail Roads, for seventeen years past, more particularly on the Central Rail Road of Georgia for eight years past, and during said seventeen years have been practically acquainted with your make of Springs, and I have no hesitation in saying, that your Springs with open work are the best Steel Springs I have ever used or seen in use.

Yours, respectfully, GEO. W. ADAMS,

Superintendent S. W. R. R. of Georgia.

Transp. Office, W. & A. R. R.

Atlantic, Jan. 31, 1852.

Messrs. JAMES JEFFRIES & SON,
Gentlemen: This road has used the Springs made by your firm since its first opening, under both Engine and Cars, and they have given entire satisfaction to all.

Very respectfully, WM. D. FULTON,

Superintendent.

Montgomery & West Point R. R. Co.

Montgomery, Ala., Feb. 23, 1852.

This will certify, that this Company have been for years using, both under their Engines and Cars, Springs from the manufactory of James Jeffries & Son, of Philadelphia, and are so well satisfied of their superiority that we can confidently recommend them to all companies in need of Springs.

SAMUEL G. JONES,

Engineer and Superintendent.

Flues.

LAP WELDED WROUGHT IRON FLUES of a very excellent quality for Locomotive builders, imported to order at low prices. Samples may be seen at
1m24 ELLIOTT & CO.'S R. R. Agency, 4 William st.

Freight Cars.

WE offer for sale at a large bargain—25 Box Freight Cars, built in the best manner by Harlow and Hollingsworth, Wilmington, Del. They are for 5 ft. gauge.
1m24 ELLIOTT & CO., 4 William st.

Passenger Cars.

WE offer for sale 10 first class 60 seat Passenger Cars.
1m24 ELLIOTT & CO., No. 4 William st.

DIVIDEND NOTICE.

The Semi-Annual Interest falling due in this city on the first day of July, 1855, on the following named Securities, will be paid on and after Monday, the 2d proximo, at the office of the undersigned, on presentation of the proper coupons, viz:—

The Bonds of the State of Indiana for Banking purposes, issued in 1834, being the \$300,000 Loan, 5 per cents.

The Bonds of the City of Pittsburgh, Pa., issued to the Ohio and Pennsylvania Railroad Co., 6 per cents.

The Bonds of the City of Pittsburgh, issued to the Pittsburgh and Connellsville Railroad Co., 6 per cents.

The Bonds of the City of Alleghany, Pa., issued to the Ohio and Pennsylvania Railroad Co., 6 per cents.

The Bonds of the City of Chillicothe, Ohio, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

The Bonds of the City of Marietta, Ohio, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

The Bonds of the City of Wheeling, Va., issued to the Marietta and Cincinnati Railroad Co., 6 per cents.

The Bonds of the City of New Albany, Ind., issued to the New Albany and Salem Railroad Co., 7 per cents.

The Bonds of the Town of Harmer, Ohio, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

The Bonds of Franklin County, Ohio, issued to the Cleveland, Columbus and Cincinnati Railroad Company.

The Bonds of Franklin County, Ohio, issued to the Columbus and Xenia Railroad Co., 7 per cents.

The Bonds of Greene County, Ohio, issued to the Columbus and Xenia Railroad Co., 7 per cents.

The Bonds of Stark County, Ohio, issued to the Ohio and Pennsylvania Railroad Co., 6 per cents.

The Bonds of Richland County, Ohio, issued to the Ohio and Pennsylvania Railroad Co., 6 per cents.

The Bonds of Alleghany County, Pa., Special Loan of \$75,000, 6 per cents.

The Bonds of Alleghany County, Pa., issued to the Pittsburgh and Connellsville Railroad Co., 6 per cents.

Ross County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

Athens County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

Washington County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

Van Wert County (Ohio) Bonds, issued to the Ohio and Indiana Railroad Co., 7 per cents.

Allen County (Ohio) Bonds, issued to the Ohio and Indiana Railroad Co., 7 per cents.

Allen County (Indiana) Bonds, issued to the Ohio and Indiana Railroad Co., 7 per cents.

Crawford County (Ohio) Bonds, issued to the Ohio and Indiana Railroad Co., 6 per cents.

The Bonds of Champaign County, Ohio, issued to the Columbus, Piqua and Indiana Railroad Co., 7 per cents.

The Ohio and Pennsylvania Railroad Co., Mortgage Bonds, 7 per cents.

The Marietta and Cincinnati Railroad Co., 1st Mortgage Bonds, 7 per cents.

Fort Wayne and Chicago Railroad Co., 1st Mortgage Bonds, 7 per cents.

WINSLOW, LANIER & CO., 52 WALL ST.
New York, June 27th, 1855. 2t26

DIVIDEND NOTICE.

The Coupons falling due on the 1st of July next, on Six per cent. Bonds of the City of Covington, Ky., guaranteed by the Covington and Lexington Railroad Company, will be paid on Monday, the 2d of July, at the office of WINSLOW, LANIER & CO., 52 WALL STREET, NEW YORK.

S. J. WALKER, Treasurer,
Covington and Lexington Railroad Co.
June 27, 1855. 2t26

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st of July, 1855, on the First Mortgage Bonds, and the Real Estate Bonds (special mortgage) of the Bellefontaine and Indiana Railroad Company, will be paid on and after that date at the banking office of WINSLOW, LANIER & CO., No. 52 WALL STREET, NEW YORK.

JAS. H. GOODMAN, President,
Bellefontaine and Indiana Railroad Co.
Dated Marion, (O.) June 20, 1855. 2t26

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st of July, 1855, on the First Mortgage Bonds of the Dayton and Michigan Railroad Company, will be paid on and after that date at the banking office of WINSLOW, LANIER & CO., 52 WALL STREET, NEW YORK.

HENRY S. MAYO, Treasurer,
Dayton and Michigan Railroad Co.
Dated Troy, (O.) June 20, 1855. 2t26

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st of July, 1855, on the First Mortgage Bonds of the Indianapolis and Bellefontaine Railroad Company, will be paid on and after that date, at the banking office of WINSLOW, LANIER & Co., 52 WALL STREET, NEW YORK.

THOS. H. SHARPE, Treasurer,
Indianapolis and Bellefontaine Railroad Co.
Dated Indianapolis, (Ind.) June 20, 1855. 2t26

DIVIDEND NOTICE.

The Coupons falling due on the 1st of July next, on the Income Bonds of the Indiana Central Railroad Company, will be paid on and after the 2d day of July prox. at the office of WINSLOW, LANIER & CO., 52 WALL STREET, NEW YORK, on presentation of the proper Coupon.

JOHN S. NEWMAN, President,
Indianapolis, June 25, 1855. 2t26

Notice to Contractors.

SEALED PROPOSALS will be received at the office of the subscribers, in Dresden, Weakley county, Tennessee, until Monday, June 11th, 12 o'clock A.M., for the grubbing and clearing, grading, masonry, &c., of fifty miles of the Western division of the Nashville and Northwestern Railroad, being that portion from the junction of the Mobile and Ohio Road from Obion (13½ miles from Hickman, in Ky.) to Huntington in Carroll county. The work is divided in sections of about one mile each, and bids will include one or more sections. The soil is light and easily excavated; the location is healthy and well watered, and supplies are abundant and cheap. Payments will be made monthly in cash, but propositions will be favorably considered for a portion to be paid in stock or bonds of the road.

Bids will be received at our office in the city of Nashville, for the grading and masonry of thirty miles of the Eastern division of said road, until Tuesday, July 10th, A.M. This division of the work is heavy—containing about 140,000 yards of rock excavation—25,000 yards of masonry, besides a large amount of earth excavation, bridging, &c. The entire road is easy of access, via Cumberland River to Nashville, Tennessee River to Reynoldsburg and Hickman on the Mississippi, with good roads along the entire line. Profile, plans and specifications may be seen at the office in Nashville, at any time before the letting, and at Dresden one week previous to letting the Western division.

BECKER & RUST,
General Contractors.

Wm. S. Rowland & Co., RAILROAD IRON

AND
Commission Merchants,
NEGOTIATORS OF CREDIT FOR RAILROAD COMPANIES,
No. 6 WALL STREET, NEW YORK.

United States Railroad Car Brake Company,

No. 62 BEAVER ST., NEW YORK.

President, Secretary and Treasurer,
GOUVERNEUR MORRIS, NORMAN S. WASHBURN,
General Agent—WILLIAM G. CREAMER.

Directors,
GOUVERNEUR MORRIS, HENRY SHILDEN,
JOHN M. HOPKINS, WILLIAM NORRIS,
WILLIAM G. CREAMER.

We now offer to Railroad Companies the cheapest, simplest, and most efficient method of enabling the engineer of a locomotive to apply the entire brakes of a train that has ever been made. We have in our office a full-size model showing the operation of this invention perfectly, to which we ask the attention of all persons interested in railroads. It is needless to describe the advantages of giving the engineer the power to apply the brakes. Suffice it to say there is hardly a railroad accident occurs but the adoption and proper understanding of this invention would totally prevent or greatly mitigate. Its immediate adoption is demanded as well by the interests of the Company as the safety of persons and property conveyed by railroads. We offer every facility to Companies desirous of testing for themselves the advantages of this method. For circulars and other information apply at the office of the Company.

W. G. CREAMER, General Agent.

The Troy Iron Bridge Co.

ARE prepared to erect Iron Bridges or Roofs, or any kind of bearing trusses, girders, or beams, to span one thousand feet or under, of any required strength, in any part of the country. Their bridges will be subjected to severe tests, and can be built for about the price of good wooden ones. Address BLANCHARD & FELLOWS, Troy, N. Y.
April 1st, 1855.

Railroad Iron.

THE undersigned having leased the extensive works of the Cambria Iron Company, situated at Johnstown, Cambria County, Penna., and purchased all their personal estate are now prepared to execute at short notice orders for rails of any required pattern or weight, on the most liberal terms.

WOOD, MORRELL & CO.,
Johnstown, Cambria Co., Pa.
Philadelphia Office: North Penna. R. R. Building.

Theodore D. Judah,

Chief Engineer, Sacramento Valley Railroad,
Sacramento, Cal.

Lithography.

G. WHISENBORN, Civil Engineer and draughtsman 131 Fulton St. up stairs; also gives his attention to the engraving of maps, and machinery on stone. Locomotives are neatly lithographed at this establishment on the most reasonable terms.—Orders are solicited.

PHILADELPHIA RAILWAY AGENCY

General Furnishing Depot OF ALL ARTICLES REQUIRED BY

RAILROAD COMPANIES.

No. 80 South Fourth Street,

PHILADELPHIA.

Railroad Chairs, Railroad Spikes, Car Wheels, Car Axles, Boiler and Tank Rivets, Bolts, Nuts, Washers, Car Lanterns and Lamps, Conductors' Lanterns, Car Findings &c., &c.	Engineers' Lanterns, Locomotive Head Lights, Car and Switch Locks, Jack Screws, Vises, Patent Oil Cans, Steam Gauges, Steam Whistles, Spring Balances, Car Findings &c., &c.
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ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to contracting for Locomotives, Cars, Railroad Iron, &c. The subscriber being Agent for several manufacturers of Machinery Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited.

50 ly THOS. M. CASH.

ENGINEERS' AND SURVEYORS'
INSTRUMENTS, MADE BY
Edmund Draper,
Surviving partner of
STANCLIFFE & DRAPER,



No. 22 Pear Street, below Walnut,
near Third St., PHILADELPHIA.

To Railroad Companies, Bridge Builders, Merchants and Machinists.

THE undersigned continue to manufacture at the Tredgar Iron Works, Richmond, Va., Bar Iron of every description, Railroad Chairs and Spikes, Car and Locomotive Axles, &c., &c., and solicit a call from those in want of such articles, before they make their purchases.

Our iron has been used very extensively for the last 18 years in the construction of Government work, Railroad Fastenings, Bridge Bolts and other Bridge work; and has given universal satisfaction.

On this point we give a copy of a letter received from one well qualified to give an opinion on the subject, having a very large experience.

MORRIS & TANNER,
OFFICE MASTER OF ROAD BALTIMORE, & CHAS. E. M. CO.
Baltimore, March 9th, 1855.

Messrs. Morris & Tanner, Tredgar Iron Works,

I take great pleasure in recommending the Bar Iron manufactured at your establishment to all who are in want of a superior article. I have used it in the construction of Iron Bridges, and also for Chairs and Fastenings for Track and iron free to say that for strength and finish it compares favorably with the best manufactured American Iron.

W. BOLLMAN, Master of Road.

Notice to Contractors.

OFFICE OF DUBUQUE & PACIFIC RAILROAD CO.
Dubuque, 20th June, 1855.

SEALED PROPOSALS will be received at this Office until the 20th July next, for the Grading, Masonry, Superstructure, and Equipage, &c.; required to construct and complete the First Division of the Road of this Company, extending West of Dyererville, a distance of 30 miles.

The means of the Company amount to the sum of \$500,000; the balance must be furnished by the Contractors. No proposals will be entertained, except from parties of the most unquestionable ability.

Maps, Profiles, Plans, Estimates, &c., can be seen at this Office. Any information can be obtained by addressing the Secretary of this Company at Dubuque, or R. B. MASON, Esq., Chief Engineer, Chicago.

I. P. FARLEY, Pres.
EDWARD STIMSON, Sec.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA,
PATENTEE OF THE
HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be
seen at the Engineer's office of the New York & Erie Railroad

Meigs & Greenleaf,
Office No. 23 William st.,
WILL give prompt attention to the purchase and sale of
STOCKS, BONDS, &c., strictly on commission. Orders
respectfully solicited.
CHAS. A. MEIGS, late Cashier Am. Ex. Bank.
A. W. GREENLEAF, late of No. 2 Wall st.
REFERENCES: American Exchange Bank, Bank of the Re-
public, Metropolitan Bank, Merchants' Bank. 1y18

AUBURN STEAM FORGE,
AUBURN, N. Y.—CHAS. RICHARDSON, Proprietor.
Manufactures
Car and Locomotive Axles,
STEAMBOAT AND MILL SHAFTS,
CRANKS, CRANK PINS, CONNECTING RODS,
Wagon Axles, Pick Axes, Crow Bars, &c., &c.,
of the best assorted Scrap Iron, and WARRANTED. [10.1

OFFICE OF WATER WORKS,
Detroit, April 2d, 1855.
THE BOARD OF WATER COMMISSIONERS of the city
of Detroit, pursuant to an act of the Legislature of the
State of Michigan, will receive Sealed Proposals until the
eleventh day of June next, at 12 o'clock, A.M., for a loan upon
the credit of the city of Detroit, for the sum of Two Hundred
and Fifty Thousand Dollars, and upon bonds, as follows: Fifty
thousand dollars, payable in twenty-five years; one hundred
thousand dollars, payable in thirty years, and one hundred
thousand dollars, payable in thirty-five years, with interest, at
seven per cent. per annum, payable semi-annually. The principal
and interest payable in the city of New York.
No proposal will be received for a less rate than the par value
of such Bonds.
Proposals to be directed to the "President of the Board of
Water Commissioners of the city of Detroit," and endorsed
"Proposals for Loan."
EDMUND A. BRUSH,
SHUBAEL CONANT,
HENRY LEDYARD,
JAMES A. VAN DYKE,
WILLIAM V. NOYES,
Commissioners.

For Sale.
BY the Baltimore and Ohio Railroad Company, 24 crate cars
adapted to railroad purpose, which will be sold at a rea-
sonable price. For further information, apply to
SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

Machinists' Tools.
A SUPERIOR CLASS,
DESIGNED particularly for Railroad work, manufactured
by L. B. TING & CO., (late ALDRICH, TING & Co.)
October 7, 1853. LOWELL MASS

To Land Claimants in Texas.
If you have any business in relation to Lands in Texas address
W. B. SROUT, Clarksville, Red River County, Texas, and it
will be attended to promptly. 1ly

To Railroad Companies.
COLLINS' PATENT
VENTILATORS,
FOR
Ventilating all kinds of
PUBLIC AND PRIVATE BUILDINGS
Railroad Cars, Depots, &c.

THE Subscribers would invite
attention of the public to the above
celebrated Patent Ventilator. This Ven-
tilator is the best one now known of, for
giving a pure air in rooms, and clearing all foul air. It has been
adopted by all the principal Railroad Companies and Car Fac-
tories, and is extensively used for private dwellings, and for the
cure of smoky Chimneys cannot be excelled. Manufactured and
for sale by

BAKER & WILLIAMS,
No. 406 Market st., Girard Row,
Sole Agents for Pennsylvania.
STRICKLAND KNEASS,
Principal Assistant Engineer P. R. R. Co.
OLIVER W. BARNES,
Principal Assistant Engineer P. R. R. Co.
G. E. STRAUGHAN,
Supt and Eng. Ohio and Indiana R. R.
E. MILLER,
North Pennsylvania R. R.

New York and Erie R. R.

On and after Monday, July 2d, and until further notice

PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
BUFFALO EXPRESS, at 6 a.m., for Buffalo.
MAIL, at 8 1/4 a.m. for Dunkirk and Buffalo, and intermediate
stations.—Passengers by this train will remain over night at
Owego, and proceed the next morning.

ROCKLAND PASSENGER, at 3 p.m., (from foot of Chambers
st.) via Piermont for Suffern's and intermediate stations.

WAY PASSENGER, at 4 p.m., for Newburgh and Otisville,
and intermediate stations.

NIGHT EXPRESS, at 6 1/4 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and inter-
mediate stations.

STEAMBOAT EXPRESS, every day, excepting Saturdays, at
6 1/4 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays Two Express Trains—at 6 1/4 and 6 1/2 p.m.
These Express Trains connect at Elmira, with the Elmira &
Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dun-
kirk with the Lake Shore Railroad for Cleveland, Cincinnati,
Toledo, Detroit, Chicago, etc., and with first class splendid
steamers for all ports on Lake Erie.

20.17 D. C. McCALLUM, General Sup't.

Philadelphia, Wilmington & Baltimore Railroad.

**UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.**

Trains will leave the Southern and Western Station, corner of
Broad and Prime streets, Philadelphia, at 8 30 a.m. 12 45, 3 and
11 p.m.

FARE BY THROUGH TICKETS TO THE SOUTH.	
From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.	
From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00
An extra charge will be made for meals and state rooms on ocean th boat	
S. SPAFFORD	

CHILLED WHEELS,
FOR
RAILROAD CARS & LOCOMOTIVE ENGINES
Bush & Lobdell,
WILMINGTON, DELAWARE.

ARE prepared to execute promptly orders to any extent
for their celebrated Wheels, (with or without axles,) the
character of which is well known.

PROPOSALS FOR THE SALE
OF
\$600,000
First Mortgage Convertible
RAILROAD BONDS.

THE DELAWARE, LACKAWANNA AND
WESTERN RAILROAD COMPANY offer for sale,
at par, the remaining Six Hundred Thousand
Dollars of their Seven per cent. Convertible Mort-
gage Bonds, of their issue of One Million Five
Hundred Thousand Dollars of the same tenor and
date, authorized to be issued upon the Eastern
Division of their road.

These Bonds are issued in sums of \$500 and
\$1,000 each, transferable only on the books of the
Company; the interest is payable semi-annually,
at the office of the Company in this city, the
principal being payable 1st of April, 1875.

They are secured by a first and only mortgage,
executed to Moses Taylor and Louis A. Von Hoff-
man, Trustees, upon the Eastern Division of the
Railroad, extending from the Lackawanna Valley
east sixty-one miles to the Delaware river, for the
completion of which they are issued. They are
convertible into the capital of the company until
1st of April, 1860, from which time a sinking fund
is provided, by semi-annual payments to the
United States Trust Company, of New York, of
an amount sufficient, with accruing interest, to
liquidate whatever amount, if any, may not pre-
viously have been converted into stock.

The D. L. & W. R. R. Co. is a corporation char-
tered by the State of Pennsylvania and is both

a railroad and coal company. Its railroad ex-
tends from Great Bend, where it connects with
the N. Y. & Erie R. R. southerly, crossing the
Lackawanna Valley at the village of Scranton,
and thence to the Delaware River, which it crosses
about five miles below the Water Gap—a dis-
tance in all of 110 miles. At this point it con-
nects with the New Jersey railroads, making a di-
rect communication to New York and Philadel-
phia. The road is of the same gauge as the New
York and Erie (six feet) and a contract has been
entered into with the New Jersey Central Rail-
road, by which the coal and other freight of the
company will be brought, without changing cars
to Elizabethport, and this arrangement will prob-
ably extend to a point opposite the city of New
York.

The paid up capital of the Company is upwards
of \$3,000,000, and its funded debt on both divi-
sions, exclusive of the \$600,000 now offered for
sale, is \$1,800,000. The coal estate consists of
some fifteen hundred acres of the choicest lands,
in the centre of the great Lackawanna coal basin,
with ample machinery, cars, mining fixtures,
tools, &c.

The Northern Division of the road has been in
operation some three years, the net earnings of
which, the past year, with the profits on coal, were
sufficient to pay the interest on the whole capital
stock and debt, including the expenditure of up-
wards of \$1,200,000 to the construction of the
Eastern Division, which has not yet become pro-
ductive, besides leaving a surplus of over \$70,000.
The rapid increase in the business of the Trans-
portation Department, and the contracts for the
sale of coal already made, ensure a still more
favorable result for the present year.

It is believed the convertible privilege and sink-
ing fund are features of these Bonds which will
commend them to the public, and that their secu-
rity for permanent investment is undoubted.

The following comparative statement of the in-
crease of earnings in the Transportation Depart-
ment, for the first four months of the years 1853,
1854 and 1855, may be taken as some indication
of the progressive nature of the enterprise, as
shown by the working of the Northern Division
disconnectedly:

1853.	1854.	1855.
\$34,270 67	\$59,439 38	\$91,129 87

As the sales of coal, by the Northern outlet, are
mainly dependent upon canal navigation, that
item of increase cannot now be shown. The com-
parative results will be more favorable, however,
than those shown in the Transportation Depart-
ment; and the opening of the Eastern Division
cannot fail to add largely to both the general
traffic and the coal business of the company.

For further information, or for the reports of
the operations of the company, for the years 1853
and 1854, apply at the office, 49 Wall street, where
circulars may be had and application for the
Bonds may be made. GEO. D. PHELPS,

WM. E. WARREN, Treasurer. Pres't.

MANAGERS.
DRAKE MILLS, JOHN I. BLAIR,
JOHN J. PHELPS, ROSWELL SPRAGUE,
WM. E. DODGE, MOSES TAYLOR,
GEORGE BULKLEY, HENRY YOUNG,
GEORGE W. SCRANTON, SAMUEL WILLETS.

A. J. ODELL, Secretary.

New York, May 12th, 1855. 1m21

Mill Seats and Timber Lands for Sale.

A VALUABLE LUMBERING ESTABLISH-
ment in full operation, a large new mill, a
good stock of logs on hand, and a quantity of
sawed lumber in the yard.

Connected with the above is a large and desir-
able tract of timber land in Pennsylvania near the
Delaware River and convenient to the New York
and Erie Railway which will be sold in part or
whole to suit customers.

For particulars apply to E. P. WHITMORE, office
of the "Plough, Loom and Anvil," 9 Spruce st.,
New York.